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THE FIVE-DAY WEEK IN MANUFACTURING INDUSTRIES

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PREFACE

INCREASING attention is being focussed upon the five-day week as a basis of plant operation or of employee working schedules in American industry. This interest has been stimulated by publicity given to somewhat spectacular individual instances of its recent adoption, and by the spread of the shorter work week under labor union pressure in special localities and occupations, such as the building and garment trades.

At present, as this study shows, the extent of the five-day week in American industry is insignificant in comparison with the field of industrial operation as a whole, particularly if highly unionized activities in special fields, and a few large-scale instances like that of the Ford Motor Company, are set apart. Nevertheless, sporadic and slight as the movement still is in the manufacturing industries and mechanical trades, its potential importance should not be under-estimated. Since, however, it is the responsibility of industrial leadership to discern such issues and problems far in advance, a study of the five-day week schedule in industry at this time does not seem premature.

The five-day week issue, at the present stage, is in part a question of rearrangement of working hours and in part one of reduction of the work period. But variance in purpose and practice does not conceal the fact that the fundamental objective and tendency in the movement is the reduction of the weekly work period for employees, whether or not the work period for machines is restricted or extended. In effect, the five-day week is only the current form of the movement toward progressively shorter working hours for labor. Since this tendency is coupled generally, or in principle, with the assumption that wages are to be maintained or increased, the five-day week is, at bottom, also part of the general movement for higher wages.

The question of shorter working hours in this form has thus become one of social economy and industrial technology.

While the health of the worker under the greater speed and mental strain of modern industrial operation is one factor considered, the five-day week is also being advocated on grounds of the increased productivity of modern machine industry and industrial organization, and because of the need for wider markets and greater public purchasing power for the growing mass production of industry. High purchasing power of the people can not, it is argued, be developed except through higher wages. Therefore, it is contended that while progressive mass production must make commodities available at progressively cheaper prices, the population's ability to purchase them in increasing measure must be sustained through higher wage earnings; and, furthermore, unless the people have more leisure they can not use more commodities, and unless they can use them they will not want them.

Such reasoning is on the surface plausible and appealing, but its simplicity and plausibility conceal a tangle of complex and difficult problems. The industry of a great nation, like the United States, is not one large factory but a vast collection of separate industries and establishments, in many ways interdependent but also in constant competition, each with its own problems of costs, prices and markets. No single method of operation or philosophy of management, even though it may be theoretically sound, is generally applicable. In the course of time, individual adjustments and policies may tend in the direction of one general practice, such as the five-day week. Experience in this field, however, has not been general or long enough, as yet, to enable anyone to say with assurance that such practice, or the philosophy upon which it is based, will be generally or universally valid from the point of view of the national economic interest.

For the present, the task of industry is to follow the growth of the five-day week movement and to analyze the fund of concrete experience that has been, and is being, accumulated. In this way, industry will be currently prepared for the exercise of sound judgment upon the question whenever it may arise as an issue.

To assist in this task is the purpose of the present study, which intends only to describe the present status of five-day operation and the experience with it in American manufac-

turing industries where it has been applied. The study is confined to a presentation of factual data, with no attempt to enter upon a discussion of the general economic or social aspects of the question, which at this stage can be matters only of opinion and conjecture.

While this investigation was carried on, the National Industrial Conference Board had the benefit of the cooperation and suggestions of its Advisory Committee on Industrial Relations, composed of men of special knowledge and broad experience in this field, to whom the Conference Board wishes to express its indebtedness.

In the preparation of its studies, the National Industrial Conference Board avails itself of the experience and judgment of the business executives who compose its membership, and of recognized authorities in special fields, in addition to the scientific knowledge and equipment of its Research Staff. The publications thus finally represent the result of scientific investigation and broad business experience, and the conclusions expressed therein are those of the Conference Board as a body.

This volume is the result of an investigation conducted by the Conference Board's Research Staff, under the supervision of the Staff Economic Council.

MAGNUS W. ALEXANDER
President

New York City
September, 1929

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THE FIVE-DAY WEEK IN MANUFACTURING INDUSTRIES

INTRODUCTION

THE question of the five-day week has several aspects that are commonly confused in current discussion and must be sharply distinguished before there can be any clear understanding of the problem.

In the first place, the five-day working schedule may involve a mere rearrangement or redistribution of weekly working hours, or a reduction in the weekly work time, or both. It is quite true that, in most cases where the five-day week is applied, some reduction of weekly working hours is involved, and that popular interest attaches chiefly to the shortening of hours and increase of leisure with which the five-day movement is associated. Nevertheless, the five-day week can also be considered on its merits as a redistribution of the weekly hours of work, quite apart from any shortening of them that may accompany such rearrangement.

Secondly, it should be noted that, whether attention is centered on the shortening or on the rearrangement of working hours, the application of the five-day week may be considered in one aspect as a purely practical administrative problem of management, or in another aspect as a general question of economic and social theory. An individual employer can determine whether it is practicable or desirable for him to operate his plant five days in the week, or to institute a five-day working schedule for his employees even though the plant is operated on a six-day basis. Practical considerations of production costs, public psychology and morale of employees will govern him, and considerations of earnings, use of leisure and the like, will sway workers in their attitude in the matter. The consequences in each case will be of importance chiefly to the parties concerned. But, if the question is whether the five-day week, either as a reduction or as a re-

arrangement of working hours, should or could be generally applied in industry, by legislative enactment, by force of collective agreement, or merely by pressure of popular opinion or general compliance with widening custom, it is more difficult to arrive at a conclusive answer. Complex and difficult problems of economic and social welfare are at once raised for employers, workers and the public, and it is impossible safely to settle these problems by appeal merely to individual preference or experience.

This study is concerned primarily with the first-mentioned aspect of the five-day week question, that is, the practical administrative problem for the individual manufacturer, as it is revealed in the experience and attitude of employers and workers in cases where the five-day week has been applied. The more general problems of economic and social theory that are bound up in this question are outside the scope of this inquiry. Such problems, of course, are inevitably raised by the individual and specific experiences described in this survey, but they can not be solved merely by reference to them, and this study must not be taken as an attempt to do so. In order, however, that the purpose and scope of this study may be clearly understood, it is desirable at the outset to review in some detail the questions that arise in connection with this problem and to indicate specifically those with which this survey is concerned.

Certain surface advantages of the five-day working schedule for both workers and employers are evident, but these may or may not outweigh other, more far-reaching, considerations that are involved. It is probable that a considerable majority of wage earners would prefer the concentration of the work week into five days, even if this involved the slight lengthening of the working hours in these five days to include the hours to be lost on the sixth work day. The possession of two entire days of freedom from work each week might well stimulate additional effort during the other five days. But if the hours of the sixth day, usually Saturday, were not spread over the week, and if no wage adjustment was made to compensate for the lost time, it is not so certain that the shortened work week would be generally acceptable to the workers.

On the other hand, for those employers whose plants operate on a five-and-one-half day schedule, the five-day schedule would permit the elimination of the last half-day, which has frequently been economically unsatisfactory. In addition to the fixed daily cost of putting the plant into operation, which on a short Saturday must be distributed over only a half-day's production, efficiency has usually been found to be subnormal on the short day. The worker's thoughts tend to wander to plans for the week-end, the rate of absenteeism is high, and discipline is generally lax. From this angle a five-day schedule may appear attractive to many employers.

In any consideration of the practicability of the five-day week, questions of output and costs are naturally uppermost in the minds of employers. Can the output usually obtained in a week of a given number of hours spread over five and one-half or six days be consistently obtained from the same number of hours concentrated into five days? This resolves itself into a question of relative efficiency during these extra hours when, on the one hand, they are distributed over the week, and on the other are combined to form a separate work day. If the hours of the sixth day are dropped altogether, can the former five-and-one-half or six-day production be equalled or closely approached in the shorter five-day week through greater efficiency and application? The wage payment system in force is likely to be an important factor in this consideration. A piece-work or other incentive wage plan may secure as much output in five days as was formerly produced in five and one-half or even six days, because of the employees' desire not to suffer a loss in earnings. Under a time-work wage plan this is less likely to be the case. If the sixth work day is dropped altogether, will a readjustment in wage rates be necessary to permit earnings of weekly wages equal to those earned under the longer schedule? When it is necessary to work on the sixth day shall such work be compensated at regular rates or be considered overtime work? Whether wage rates be adjusted to prevent any loss of earning power from the shortened work week, or such a loss be partially provided for, or the wage schedules be maintained unchanged, are questions of policy for the individual plant management.

These more direct questions involved in considering the practicability of a five-day working schedule are likely to lead far afield into more conjectural problems of economics. Would a general adoption of the five-day week without maintenance of the full working time result in a reduction in our national manufacturing output, because of inability of improved processing to compensate for the productive time lost? If such a loss in volume of production were in prospect, would such a condition be desirable? It is generally conceded that, except for brief periods, the productive capacity of the country's manufacturing facilities is seldom approached, and is even more rarely taxed, and yet the capacity of domestic and foreign markets to absorb industry's present output is, in general, all too easily satisfied. Therefore, would such a natural curtailment of output be advantageous? In case such a curtailment became general, would the price structure be disturbed? In other words, could industry produce as economically on the shorter schedule as on the longer, or would commodity prices rise because of higher unit production costs? In the event that higher prices and lower earnings followed the reduction in working hours, would demand for manufactured products be maintained? Or would the extra day of leisure tend to stimulate the purchase and consumption of manufactured commodities?

Whatever the direct result of a widespread adoption of the five-day working schedule might be upon the manufacturing industries immediately affected, the more indirect, but not less important, effects upon collateral industries should not be lost sight of. Economic activities in modern society are inseparably interrelated and the reduction or rearrangement of working schedules to a five-day basis in certain industries might be expected to affect in some measure other industries which for one reason or another find such a change impracticable. Questions of special interest arise in connection with the effect of the application of the five-day week in manufacturing industries upon other industries that supply them certain services, such as light, power and transportation.

The electric light and power industry is under the necessity of maintaining producing facilities capable of meeting the peak demand for current no matter how small a portion

of the day or week may be covered by this peak demand. Capital investment in production facilities in the industry is, therefore, regulated by maximum requirement. This problem of peak load has in late years been intensified as a result of the gradual but progressive shortening of the working day. If, in the near future, work on Saturday should become the exception instead of the rule, the industrial demand for power on Saturday would practically cease, leaving the power companies with relatively idle equipment on two of the seven days in each week. In addition, if part of the former Saturday working hours were retained and spread over the preceding five days of the week, the length of these working days would be increased, a situation that at certain times of the year would tend to bring about a crossing of the power load and the light load, thereby perhaps creating a new maximum requirement for current. Therefore, in the event of a widespread adoption of five-day operation, power companies apparently face a dilemma; first, with a greater concentration of demand resulting in a new maximum and the need for additional capital investment to provide facilities for meeting this maximum demand, and second, at the same time a longer period of comparative idleness for equipment with fixed charges going on and little revenue coming in.

While these problems may be considered as primarily affecting the public utility companies themselves, they may have a much wider bearing. These companies might find the loss of revenue on Saturday sufficiently serious, or the capital cost of new facilities enough of a strain upon their resources, to make the maintenance of present power rates impossible. In the event of an increase in these rates, manufacturing industries would feel the direct effect of problems which their adoption of the five-day schedule had created.

Such questions, however, are based upon the assumption that the five-day week would be introduced generally in a relatively short period of time, which is very doubtful, and that such application of the five-day week would mean that plant operation would necessarily be restricted to five-days per week or to the same five days for all establishments. As a matter of fact, any increase in five-day operation in manufacturing industries is likely to be so gradual that, judging

by the past, technical improvements and managerial efficiency will, it may be hoped, discover solutions for these difficulties in advance of their development into acute problems.

Other questions of a social character project themselves into the five-day week discussion. If the attempt is made to accomplish in five days what was formerly accomplished in five and one-half or six days, what will be the effect upon fatigue and health of workers? The pace of present-day manufacturing is not leisurely. Even where physical effort is reduced, mental concentration is likely to be intensified. If the hours of the sixth day are spread over the week, or the attempt is made in five unlengthened days to equal the former five-and-a-half or six-day output, how will this additional application affect the worker? Will the extra day of relaxation completely compensate for any added strain, or will the accelerated pace of the five days tend to exhaust the worker's energy prematurely? It is possible that the tendency toward fewer working days is a natural sequel to the intensification of modern business and industrial life. It may be argued that, if work is to be performed under constantly increasing pressure, allowance must be made for a greater amount of relaxation and rest to compensate. It may be that overnight recuperation will not be adequate and that provision will have to be made for a more extended period of rest at the end of each week.

Will the shortened work week, by creating more jobs, tend to offset the apparently decreased demand for human labor, caused by increased mechanization of productive processes? Such a view is given color by the recent action of the Ford Motor Company, a leading exponent of the five-day week, in resuming six-day operation without sacrificing the principle of the five-day week for the workers. Additional men have been employed, and by means of a series of overlapping shifts the plant will be operated six days, although individual employees will work only five days a week.

Still broader and more complex issues are met when questions of the social value of additional leisure are raised. It is recognized that increased leisure has come to have a definite economic value under the present organization of industry,

in that it permits for some industries a better balancing of production and consumption. Commodities tend to be overproduced and to lose part of their market value if consumers, though able to buy them, do not have time to use them. But many persons question whether the extension of leisure is justifiable merely on such grounds, and ask whether additional leisure will be used in ways beneficial to the cultural interests of society. Employers, as such, have perhaps no direct interest in these latter questions, yet as citizens they are bound to be affected by them.

Enough has already been said to indicate the diversity of questions raised by the five-day week proposal, but this very complexity should stimulate rather than diminish interest in the subject. In the short space of a few years, the five-day week has passed from the status of a vague future possibility to that of an accomplished fact in several hundred establishments, and has become a live question in many others. Like many other phases of administrative policy, its merit can not be decided once and for all. In each individual establishment these and other questions will have to be considered when determining the advisability of a five-day working schedule.

After all, the movement toward shorter working hours is not independent and isolated from other factors involved in economic development. It is but one of the related tendencies which, to be sound, must move in conformity with general economic law and progress. To attempt to accelerate a single constituent of this progress arbitrarily is to invite economic maladjustment, which is more likely to retard than to expedite orderly advance toward the desired goal.

The immediate issues involved in five-day week operation are comparatively simple. When hours of work per week remain the same under the shorter as under the longer work week, no important administrative questions arise. But when weekly hours are reduced, the important problem of maintaining production and unit wage costs comes at once to the front. If, immediately following the change to the five-day schedule, the production and wage cost situation should prove unsatisfactory, is there a likelihood that conditions could be corrected through further improvement in methods

of management or in processing? Decisions of management upon the immediate practicability of the five-day schedule will be strongly influenced by its attitude in regard to these points. While the five-day week must still be considered more as an experiment than as an established and general policy, it is undoubtedly receiving serious consideration by business executives, not as an abstract proposition but as a definite practical question for their individual enterprises.

A well-founded appraisal of the practicability of the five-day week as a general working schedule has been made difficult in the past by the lack of data upon which sound judgment could be based. Favorable or unfavorable attitude toward the question has heretofore rested largely upon personal prejudice or the accepted school of economic thought, rather than upon objectively analyzed evidence. The National Industrial Conference Board undertook this study of the five-day week, not in an attempt in any way to pass final judgment upon this work arrangement, but to take account of it as one possible schedule of industrial operation and to assemble available data that would show the extent of its use, the reasons for its adoption, the character of the industries in which it is found, the technique of its operation and its effectiveness as a regular working schedule.

In interpreting the results of the investigation it is important to note at the outset: first, that the total number of employees found to be on a regular five-day week schedule, even including the huge employment of the Ford Motor Company, constitutes only about 2.6% of the total number of wage earners in manufacturing in the United States; second, that most of the instances of five-day week operation that were found and studied are confined to certain industries in which, as a rule, labor is highly organized; and third, that most progress in the spread of the five-day week has probably been in the highly unionized construction industry, which is not treated in detail in this study since the problems involved are radically different from those in manufacturing industries.

CHAPTER I

THE TREND TOWARD SHORTER WORKING HOURS

IT HAS already been emphasized that the adoption of a five-day work week in a manufacturing plant does not necessarily mean a reduction of the weekly working time of employees, but may consist entirely, or in part, of a rearrangement of the work schedule. Nevertheless, because of those instances in which it does mean a reduction of working time, the five-day week is quite commonly taken to be a part of a general movement in industry toward shorter working hours. It will therefore be useful to review briefly the available material regarding the trend toward shorter work time, and the extent to which that trend has taken effect in the various occupations.

Wide-spread and coordinated action aimed at reduction of hours of work in the United States dates back only to about 1850. Originally, little or no distinction was made between the working hours of industrial employees and of agricultural workers. The working schedule of the farmer, from sunrise to dusk, was generally accepted, although this resulted in a variable number of hours per day according to the season. Occasional efforts of urban employees to secure shorter hours were generally not effective because of lack of the power to enforce agreements made. The movement for shorter work hours first received governmental recognition, and thereby assumed a political as well as a social aspect, when President Van Buren issued an executive order, in 1840, establishing a ten-hour day in all government-operated industries. Social reformers joined the workers in their demand for the wider extension of this arrangement, and during the next two decades several state legislatures enacted statutes that embodied similar provisions. These laws were not effective, however, because of the ease with which they could be evaded and because administrative machinery for enforcing them was generally lacking.

During the early fifties of the nineteenth century the ascendancy of labor unions changed the philosophy of the movement for shorter hours of work. Fearing that legislative action might weaken their organization and power, union leaders discouraged attempts to standardize working hours by legislation. They preferred to extend the influence of the unions by securing reduction of hours in individual industries or establishments through strikes or trade agreements. Also, the social arguments for shorter hours—to protect the health of workers and to give them more leisure—were for the time largely abandoned in favor of the argument that shorter hours would provide work for a greater number of wage earners. For a period legislative action ceased, and it was not until nearly three decades after President Van Buren's order that legislatures again turned their attention to the question of restricting hours of work. The first enforceable law limiting hours of work applied only to women and was passed by the Massachusetts legislature in 1879. It proved effective because by that time state bureaus and factory inspection agencies, to enforce its provisions, had been organized. Thereafter, the movement for legislative restriction of hours of work of women steadily spread, until in 1927 only five states[1] were without such a law.

Statutory limitations upon the hours that women may work now range from eight to eleven hours per day in manufacturing industries. Only six of the states which have such statutes fail to limit the hours of work per week. In only five states is the legal maximum of hours of work per day for women in excess of ten hours. Some states, in which seasonal industries are important factors, make special provisions for permissible overtime at certain seasons, or provide a fixed overtime allowance that may be distributed throughout the year at the employer's option.

The constitutionality of laws restricting the hours of work of women was upheld in 1908 by the Supreme Court of the United States in the famous case of *Mueller v. Oregon*,[2] which affirmed the right of the state to exercise its police power in this manner for the protection of the health of

[1] Alabama, Florida, Indiana, Iowa and West Virginia.

[2] *Mueller v. Oregon*, 208 U. S. 412; 28 Sup. Ct. 324 (1908).

women. This decision was reinforced by a later one,[1] bearing on the California statute regulating women's hours of work, with the result that the constitutionality of such legislation with respect to women and minors has been definitely established. On the other hand, little headway has been made in restricting by statute the hours of work of men in private enterprises, on account of the general view that such action would abridge the individual's right of contract. Exceptions to this general rule have been made in case of enterprises such as railroad operation, where the safety of others may be endangered by excessive fatigue of the responsible operators.

Most progress, however, in the direction of shorter working hours has come as a result of collective bargaining or individual agreements between management and the working force. At its 1884 convention, the American Federation of Labor set May 1, 1886, as the date for the general establishment of the eight-hour day, but although gains were made at that time and have been made since, manufacturing industry generally has not yet adopted that work schedule. That the trend, however, has been steadily toward a week of fewer work hours is evident from the data compiled by the United States Census of Manufactures, which are summarized in Table 1.

TABLE 1: DISTRIBUTION OF INDUSTRIAL WAGE EARNERS ACCORDING TO NUMBER OF HOURS OF WORK PER WEEK, 1909–1923

(Source: U. S. Bureau of the Census)

Prevailing Hours of Work per Week	Total Number of Workers					Per Cent Distribution				
	1923	1921	1919	1914	1909	1923	1921	1919	1914	1909
All groups	8,778,156	6,946,570	9,041,311	7,023,685	6,615,046	100.0	100.0	100.0	100.0	100.0
44 and under	865,687	954,908	1,107,991			9.9	13.7	12.3		
Between 44 and 48	395,691	293,111	345,897	831,723	523,652	4.5	4.2	3.8	11.8	7.9
48	2,780,803	2,334,256	2,948,393			31.7	33.6	32.6		
Between 48 and 54	1,925,029	1,262,071	1,490,150	944,685	481,157	21.9	18.2	16.5	13.5	7.3
54	768,524	542,581	811,302	1,812,560	1,019,438	8.8	7.8	9.0	25.8	15.4
Between 54 and 60	1,231,521	871,961	1,245,916	1,541,798	1,999,307	14.0	12.6	13.8	22.0	30.2
60	642,837	516,520	816,003	1,485,324	2,017,280	7.3	7.4	9.0	21.1	30.5
Over 60	168,064	171,162	275,659	407,595	574,212	1.9	2.5	3.0	5.8	8.7

[1] *Miller v. Wilson*, 236 U. S. 373; 35 Sup. Ct. 342 (1915).

Of more than six and one-half million wage earners who were employed in manufacturing in the United States in 1909, only 7.9% were found in establishments operating forty-eight hours or less per week, but by 1923, the latest date for which the Bureau of the Census has compiled figures of this nature, 46.1% of the eight and three-fourths million workers fell within this group. On the other hand, 69.4% of the industrial wage earners worked in 1909 longer than fifty-four hours per week, but the proportion falling in this group had in 1923 been reduced to 23.2%. Details of the distribution of wage earners according to the prevailing hours of labor per week from 1909 to 1923 are given in Table 1.

Similar testimony is afforded by the available figures regarding the average number of hours per week. For example, in its monthly studies concerning wages, employment and hours of work in twenty-five manufacturing industries, the National Industrial Conference Board found that in 1928 the average normal work week in these industries was between forty-nine and fifty hours, while in 1914 this average was fifty-five hours. This gradual decline in the average hours of work per week noted since 1914 is part and parcel of a general movement in American industry which has been going on for a number of years. Continuous figures on the same basis are not available, but it is interesting to note that an inquiry conducted by the United States Bureau of Labor Statistics for the years 1890 to 1906 shows a similar trend. Based on the average of the period 1890 to 1899, the index number representing hours per week stood in 1890 at 100.7 and from that year there was an almost uninterrupted decline to a minimum of 95.4 in 1906.

It is interesting to note that the curtailment of the hours of work has not been accompanied by any reduction in the earnings of the workers. On the contrary, in spite of occasional setbacks, the trend of wages has been upward during the past century and the earnings of the workers today are often many times what they were early in the nineteenth century, although working time has been substantially reduced. The inquiries of the National Industrial Conference Board, to which reference has been made, show, for example, that the average weekly earnings of all wage earners in manu-

facturing industry in July, 1929, were 124% above the level of July, 1914, while average hourly earnings were 135% above the same level. Since in the same interval the cost of living for the industrial wage earners increased only 61.6% over the 1914 level, it is clear that there has been a substantial increase in the standard of living of industrial wage earners. If it be objected that these years were exceptional and were influenced overwhelmingly by the extraordinary conditions which were the outgrowth of the war, reference may be made once more to the earlier inquiry cited in a preceding paragraph. According to its findings, there was between 1890 and 1906 an increase of 24% in hourly wages and an advance of 17% in full-time weekly earnings.

Various political and social organizations, as well as labor bodies, are constantly advocating progressive reductions in working hours. The maximum that they view at present with any tolerance is the 48-hour week, and in some trades they have made the 44-hour and even the 40-hour week the immediate goal. Success in one state or in one industry serves only to stimulate greater effort towards further reduction there and elsewhere. Economic, business or technical conditions that may have a considerable bearing upon the practicability of reductions in working schedules are usually dismissed without serious consideration. Suggestions that too frequent and stringent regulation handicaps desirable business growth and natural expansion, and even forces some establishments to move from states with such regulative legislation and prevents others from settling there, are met with the rejoinder that a state is better off without industries that can not observe humane standards for their workers.

On the other hand, many view the progressive reduction in working hours with disfavor. They resent the interference of labor and other outside organizations in matters of plant administration and are generally opposed to legislative regulation of internal industrial operation. They maintain that hours of work should be a matter of free individual contract between employer and employee.

Between these two views is that of the great majority of persons who approve the principle of shorter hours of work when its application is feasible and justified in the light of

economic conditions, but believe that such reductions as are contemplated should be accomplished gradually and without disturbing the economic balance. They recognize that such factors as technical processes and competition are determining issues, and are satisfied that, apart from exceptional cases, working periods today are not so long as generally to constitute a menace to health. But they also recognize as plausible, if not actually proved, the argument that the intensity and concentration of effort demanded by modern industrial operation may cause greater mental, if not greater physical, fatigue than formerly, and that this factor should be taken into account in deciding upon working schedules.

A new phase of the hours of work question has been reached with the definite advent of the five-day week schedule in some industrial establishments, including a few of outstanding importance. The progress of the adoption of the five-day week in industry will be followed closely both by advocates of fewer hours of work and by employers who may see it either as an answer to certain vexing administrative problems or as a source of new problems.

CHAPTER II

THE SCOPE OF THE FIVE-DAY WEEK MOVEMENT

DEFINITE knowledge with respect to the extent of the five-day week operation in American industry is very scant. It is generally known that a few prominent industrial enterprises have adopted this work schedule, because considerable publicity has attached to the announcements of its inauguration. It is also known that certain local building trades have secured its adoption. Beyond such general impressions, very little authoritative information on the subject has been available. Hence this study, in which the Conference Board was concerned mainly with the adoption of five-day week operation as a definite policy. Cases of temporary five-day operation, as during the summer months or during periods of slack business, or cases in which there was a definite intention ultimately to revert to five-and-one-half or six-day operation, were also considered with the instances of the continuous five-day week, but they are reported separately in this volume.

Moreover, this specific investigation has been confined to manufacturing establishments, but for purposes of estimating the spread of the five-day week movement in industry, other occupations should also be considered. Thus, in the report of its executive council, presented at its annual convention in New Orleans, November 19, 1928, the American Federation of Labor claims that 164,479 of its members are working under five-day, 40-hour-a-week agreements, as well as 550 office workers, distributed among twenty international unions. However, an examination of these data, here reproduced in Table 2, shows that approximately 70% of the total are employed in five building trades—those of bricklayers, carpenters, electrical workers, painters and plasterers; and that the painters' union alone contributes 38% of the total.

TABLE 2: NUMBER OF UNION MEMBERS, BY TRADES, EMPLOYED ON FIVE-DAY WEEK BASIS, OCTOBER, 1928

(Source: American Federation of Labor)

International Union	Number of Locals	Number of Members
Asbestos workers	3	202
Bricklayers	29	6,156
Carpenters	32	9,740
Cloth hat and cap workers	15	2,900
Electrical workers	11	15,100
Fur workers	20[1]	13,095
Granite cutters	13	1,380[2]
Hod-carriers	6	1,033
Garment workers—ladies'	11[3]	15,850
Garment workers—united	2	5,000
Lathers	17	2,141
Laundry workers	1	34
Painters	236	62,896
Plasterers	75	21,530
Plumbers	21	2,307
Sheet metal workers	12	724
Stone-cutters	1	36
Tailors	1	65
Typographical workers	3[4]	750
Upholsterers	5	3,540
Total	514	164,479

[1] The fur workers in thirteen locals, having a combined membership of 11,580, allow overtime during four months of the year, from September 15 to December 15, week days, three hours; Saturday, four hours. One local permits overtime in emergency cases only. The New York agreement calls for four hours' work on Saturday in these months.

[2] Of these, one local with eighty-two members has the five-day week the year round, the others have it for eight or nine months. The granite cutters also have the five-day week for from three to six months in forty locals having a combined membership of 3,406.

[3] This includes four joint boards of several locals.

[4] In night work only.

In its investigation covering manufacturing industries, the Conference Board found 270 industrial establishments that were in 1928 operating on a regular five-day week schedule, and employed 216,921 workers on this basis. It is doubtful that many of the employees included in the American Federation of Labor statement are duplicated in the Conference Board's tabulation, for the reason that, in the main, quite different occupations are covered. The known point of duplication between the two studies is in the garment industries, but union shops in these industries accounted for only about 5,500 of the employees covered by the Conference Board's study.

Taking into account the figures of both the American Federation of Labor and the Conference Board, but eliminating the estimated fifty-five hundred duplication, it would appear that 376,450 employees in manufacturing and building operations were, at the close of 1928, working on a five-day week basis, or, allowing for instances of five-day week operation herein not recorded, about 400,000. This figure for the end of 1928 was substantially exceeded when the agreement reached between the Building Trades Employers' Association of New York City and the Building Trades Council on May 4, 1929, went into effect August 24, 1929, and all building trades labor under the jurisdiction of these bodies was granted the five-day week, together with a 10% increase in wage schedule to compensate for the wage loss due to reduced working time. It was estimated that this placed an additional 125,000 to 150,000 workers on the five-day week basis. Agreements with building trades locals in other cities indicate that the total figure will be still further increased by the close of 1929.

Growth of Five-Day Week Operation in Industry

It is noteworthy that several instances of five-day week operation date back to a period when its adoption as a regular working schedule was not given much serious consideration by industry in general. The earliest instance of the shorter schedule discovered in the Conference Board's investigation was reported by a New England spinning mill, which started in business in 1908 on a five-day basis. In this case, the company reports, the majority of the management and the employees were of the Jewish faith, and a desire to observe the Hebrew Sabbath was the main reason for deciding to eliminate all Saturday work. At the same time, the management insisted that production must not suffer. Consequently, the weekly hours then current in the industry were maintained and spread over the five working days of the week. The plan has operated without interruption for twenty years, with satisfaction to both management and employees, and it is still in effect.

During the decade beginning with 1908, very few industrial establishments adopted the regular five-day schedule. The total of eleven plants adopting the shorter work week in

this decade is in marked contrast to the total of 251 in the following decade, as is shown by Table 3. A more definite trend toward the adoption of the five-day week appears to date from 1918. Apparently, the movement has gradually been gaining momentum, although this momentum is of relative rather than absolute importance, since the number operating on the five-day schedule is still insignificant in comparison with the total number of manufacturing establishments in the United States.

TABLE 3: YEAR OF ADOPTION OF FIVE-DAY WEEK IN 262 AMERICAN MANUFACTURING ESTABLISHMENTS
(Source: National Industrial Conference Board)

Year	Number of Establishments	Year	Number of Establishments
1908	1	1918	8
1909	..	1919	13
1910	1	1920	11
1911	..	1921	25
1912	..	1922	8
1913	3	1923	30
1914	1	1924	33
1915	1	1925	51
1916	2	1926	30
1917	2	1927	42

There seems to be little connection between general business conditions in a given year and the spread of five-day week operation during that period. On the one hand, in 1921, which was in the manufacturing industries probably the most unsatisfactory year in more than a decade, the number of plants adopting the five-day week was double that in any preceding year. This would suggest that during a period of production curtailment the shorter work week was adopted either from economic necessity or as an experiment, and that satisfactory experience with it, or inertia, or difficulty in changing back to a longer work schedule had led to its continuance as a permanent policy. On the other hand, the year in which the largest number of plants introduced the five-day schedule was 1925, which with 1926 was a highly satisfactory period of industrial operation. Thus, business conditions appear to have little direct effect upon the spread of the five-day week. A more reasonable explanation of the

peaks in certain years may be found in the fact that union agreements, such as those in the cloth hat and cap industry and the garment industry, became effective in those years.

Distribution by Industry of Plants Operating on Five-Day Week Schedule

The distribution by industry of plants operating on a five-day week schedule gives an indication of its applicability to different types of process and reveals the extent of its adoption in the various industries. Table 4 shows this distribution by industry and also the size and sex composition of the working forces affected.

Table 4: Distribution, by Industry and by Number and Sex of Employees, of 270 Manufacturing Establishments Operating on Five-Day Week

(Source: National Industrial Conference Board)

Industry	Number of Establishments	Workers Employed			Sex of Workers			
		Total	On Five-Day Basis		Total Employees		On Five-Day Basis	
			Number	Per Cent	Male	Female	Male	Female
Cloth hats and caps	64	1,440	1,440	100.0	897	543	897	543
Ladies' dresses	57	1,700	1,694	99.6	659	1,041	653	1,041
Men's clothing	27	8,153	7,870	96.5	4,266	3,887	4,191	3,679
Other garments	12	614	614	100.0	138	476	138	476
Printing, publishing and lithographing	36	8,827	8,301	94.0	7,435	1,392	7,023	1,278
Textiles	10	3,564	3,504	98.3	2,115	1,449	2,082	1,422
Paper products	9	4,922	4,789	97.3	4,793	129	4,660	129
Automobile and aircraft equipment	4	177,220	177,220	100.0	175,377	1,843	175,377	1,843
Miscellaneous metal products	23	5,497	5,364	97.5	4,943	554	4,868	496
Unclassified	28	6,282	6,125	97.4	3,361	2,631	3,532	2,593
Total	270	218,219	216,921	99.4	204,274	13,945	203,421	13,500

In point of number of establishments operating on the five-day schedule, the garment industries outnumber all others combined, and account for practically 60% of the total. But the combined employment in these garment plants amounted to only about 5% of the total number of wage earners employed in the 270 establishments found to be operating on a

five-day week, and to only 28% of the total wage earners if we exclude the employment of the Ford Motor Company. Thus, while the five-day week has apparently made greater headway in the garment industries than in others, neither the actual number of wage earners affected nor the proportion of this number to the total number of wage earners in American industry under the five-day week plan is particularly significant.

Another industry in which the five-day week has made considerable progress is the printing and lithographing industry, but as will be seen later, there are special conditions making the five-day week schedule particularly applicable in this industry. A comparatively small number of establishments in the textiles, paper products and metal working industries were found to operate on this schedule. Other industries in which one or more plants were found to be using the five-day schedule of operation include those which manufacture the following articles:

Aeronautical instruments
Aircraft engines
Automobiles
Automotive equipment
Carpets
Castings
Chewing gum
Copper products
Cotton spinning and manufacturing
Cotton dyeing, bleaching and finishing
Cutlery and shoe tools
Felt
General and special machines
Goggles
Guns and rifles
Heat indicators
Heating and ventilating apparatus
Insulated wire and cables
Jewelry
Ladies' hand bags
Metal tubing and hose
Noodles
Paper
Paper board
Paper cartons
Pencils
Pharmaceuticals
Pressed steel
Rubber goods
Salad dressing and spices
Shoes
Smoking tobacco
Soap
Sporting goods
Steel plate fabricating
Surface abrasives
Turkish towels
Valves
Water and oil meters
Woolens

While the variety of industries that have found the five-day schedule feasible is rather impressive at first glance, it does not prove that this schedule is universally, or even gen-

erally, practicable in operation. The majority of these industries are non-continuous in character, and length of working time is not regulated by the manufacturing process. Consequently, a few hours can be dropped from the schedule or transferred from Saturday to other days of the week without interfering materially with the production routine. In a continuous-process industry, however, the problem is quite different. There, the production process requires twenty-four hour continuous operation each working day until the close at the end of the week, usually on Saturday night, unless operation on Sundays is also imperative. For such a continuous-process plant to adopt the five-day schedule would mean the dropping of an entire day in each week, or a sixth of the week's productive time, unless a supplementary force is hired to permit six-day plant operation with five-day employment of the workers. Thus, while five-day operation in continuous-process industries was found in a few plants, it is not likely to be anything but the exception to the prevailing practice in these industries for some time.

From Table 4 it is evident that, even in establishments that are definitely on the five-day weekly schedule, a small percentage of employees works a longer schedule. This percentage ranges from less than 1% in the women's clothing industry to 6% in the printing and lithographing shops. These employees, who constitute less than 1% of the total employment in all plants covered, are chiefly maintenance and repair crews and shippers, who can often work to better advantage when the plant is not in operation.

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The sex composition of the total working force in these five-day week plants is arresting because of the apparent preponderance of male wage earners. While the sex distribution of wage earners in manufacturing industries generally is approximately in the ratio of one woman to four men, it is shown in Table 4 that in these five-day week plants the ratio is approximately one woman to sixteen men. Closer analysis, however, indicates that this proportion results from the heavy weighting given to the totals by the figures from the Ford Motor Company, which employs men almost exclusively. If figures from this company are omitted, the ratio of women to men in the remaining companies approximates

one to three and one-half, which conforms quite closely to the general industrial average.

The average size of the plants covered is, likewise, strongly influenced by the figures from the Ford Motor Company. Thus, the entire 270 establishments studied reported a total of 218,219 employees, or an average employment of 808, whereas if data for the Ford Motor Company were excluded the average employment in the remaining plants would amount to 155, which indicates that most progress in adopting the five-day week schedule has been made in establishments in the small-plant category. In fact, as shown in Table 5, more than two-thirds of the companies covered employed fewer than one hundred wage earners, and 91% of the plants had an employment of 500 or less. The average size of plants operating on a five-day schedule is, of course, strongly influenced by the large proportion of establishments in the garment trades, where employments of comparatively few wage earners are the rule. Several of such plants included in this study employed fewer than ten wage earners.

TABLE 5: DISTRIBUTION, BY SIZE OF ESTABLISHMENT, OF 270 MANUFACTURING ESTABLISHMENTS OPERATING ON FIVE-DAY WEEK

(Source: National Industrial Conference Board)

Size of Establishment	Companies		Employees	
	Number	Per Cent of Total	Number	Per Cent of Total
Less than 100	180	66.6	5,356	2.4
100 to 250	42	15.6	6,237	2.8
251 to 500	24	8.9	6,484	3.0
501 to 750	11	4.1	7,377	3.4
751 to 1000	2	0.7	1,800	0.8
1001 to 2000	7	2.6	8,031	3.7
Over 2001	4	1.5	182,934	83.8
Total	270	100.0	218,219	100.0

LABOR POLICY OF FIVE-DAY WEEK PLANTS

Management policy with regard to organized labor in establishments operating five days a week assumes considerable importance when it is realized that the factor of free-will adoption of the shorter schedule or its adoption under compulsion of the labor union has in many cases

played almost a deciding part in determining the attitude of employers toward the five-day schedule.

Of the 270 establishments found to be on a permanent five-day week schedule, 57.3% were closed union shops; 91% of these closed shops were in the garment industries. The entire employment in the union shops covered was only 3.1% of the combined employment of the 270 companies covered, and only 16.4% of the total employment when the Ford Motor Company is excluded. Consequently, although slightly over half of the establishments found to be on the five-day week basis were working under union agreements, the wage earners affected constituted only a small percentage of the total number of employees known to be working on the shorter schedule.

Even in the garment industries, in which 86.2% of the five-day week establishments are closed union shops, the remaining 13.8% of open shops were found to employ more workers than the combined total of the much larger number of union shops. Particularly in the men's clothing branch of the garment industries, with its outstanding companies of considerable size and independent of union control, the employment of one open-shop company outnumbers the aggregate working force of many small union shops. It is the adoption of the five-day week by certain of these large open-shop companies that has brought about the situation indicated.

It is also interesting to note that while the printing and lithographing industry is quite widely unionized, particularly in the large urban centers, thirty of the thirty-six establishments in this industry that reported the adoption of the five-day week were not union establishments. Furthermore, the few union shops were small in size and employed together only 4.6% of the wage earners in this industry reported as working on the shorter weekly schedule.

Whether the emphasis should be placed upon the number of establishments on the five-day week or on the number of wage earners affected depends upon the point of view. The number of establishments represents the separate instances of the adoption of this working schedule, the number of cases where management and working force or management

and labor union have adopted this policy voluntarily or under compulsion. As such, each case is significant. But it is difficult to find any comparability between a small clothing shop in New York City employing seven workers and the Ford Motor Company employing nearly 200,000. Each represents one instance of the adoption of the five-day week by a manufacturing establishment, but there the likeness stops. In contrast, the number of workers affected by the adoption of the five-day schedule indicates in a general way the proportion of the nation's, or of an individual industry's, man-power that is committed to this schedule of work. It appears to offer a more significant indication of the spread of the five-day principle and of the extent to which it has become effective as a working schedule.

On the basis of the number of establishments on a five-day week schedule, labor policy appears to be an important factor and organized labor seems to have exerted considerable influence in bringing about the adoption of this schedule. But on the basis of the relative size and importance of closed-union and open-shop plants operating under the shorter schedule, as measured by the number of workers affected, the labor union influence loses its significance and becomes a relatively unimportant factor in accounting for the spread of five-day week operation.

Location of Five-Day Week Plants

The Conference Board's study clearly reveals that the five-day week in industrial establishments is preponderantly an eastern institution, in so far as the number of plants that have adopted it is concerned. A little less than 5% of the establishments that reported operation on the schedule are located in the central states, another 3% are scattered through southern states, while 10% are in New England states. The remaining 82% are in the Middle Atlantic States, with 70% in New York State alone. This concentration in the northeastern states, and particularly in New York, is undoubtedly due in part to the fact that this section is predominantly the manufacturing section of the country; and in part to the prevalence in this section of the garment and printing industries.

CHAPTER III

THE TECHNIQUE OF THE FIVE-DAY WEEK SCHEDULE

SO radical a departure from prevailing practice as the entire discontinuance of plant operation on one day of the week other than Sunday is not likely to be adopted unless the management of the individual plant is satisfied that, in its particular case, there are good reasons for doing so, and that the best interests of the company will not thereby suffer. The reasons given by plant officials who have made this change are not necessarily the only considerations that dictated the advisability of the change, but these reasons, discussed below, indicate the more obvious motives influencing the adoption of the five-day week schedule.

Reasons for Adoption of the Five-Day Week

The reason most frequently avowed by reporting companies for substituting a five-day for a five-and-one-half or six-day schedule is to give employees more leisure time. While it may be granted that the average employer of today is genuinely interested in promoting the welfare of his workers, it is difficult to believe that so important a departure from established practice is due primarily to the desire to provide a free week-day for the enjoyment of the working force. It seems rather more reasonable to assume that something additional should be read into this reason for shortening the work schedule. It may be believed by these employers that the extra day of leisure and recuperation would make for higher efficiency during the five days of operation and therefore be a justifiable administrative expedient. Or, the more far-sighted employer, of broad social feeling, may conclude that the increasing pace and intensity of modern manufacturing procedure, with its resultant nervous strain upon the worker, would make too prolonged an application

to work a menace to health and continued vigor; and that in the interest of a present and future physically sound working force of high efficiency, an antidote must be found for this strain.

Another reason frequently cited for the change to a five-day week is the elimination of an uneconomical Saturday half-day. There are always certain fixed costs inherent in placing a plant in operation, a fact that is particularly true when the plant operates its own power house. When these costs and the usual costs of overhead are spread over a half-day's production, especially when it is a quite general experience of employers that the half Saturday production is usually below a half of the output of a normal week day, unit production costs naturally rise.

Moreover, efficiency on Saturday forenoons is likely to be below normal for a number of reasons. In the first place there is the problem of poorer attendance, particularly in plants that employ considerable numbers of women. The loss in wage for only a half day's lay-off from work is, in many instances, insufficient to overcome the inertia against going to work, especially when the daily trip to the plant involves inconvenience and expense or consumes considerable time. Married women also find it advantageous to take the Saturday forenoons for house cleaning and for catching up with their domestic duties. In addition, during the open months of the year, a Saturday forenoon lay-off permits the enjoyment of a longer week-end outing; and in these days, when the low-priced automobile has brought camping and sight-seeing trips within the reach of almost every one, this is no small factor. While these difficulties have long been recognized and many employers have endeavored to cope with them by various means, the results have generally not been successful.

Operating a plant with a depleted working force is unsatisfactory on any day, but this difficulty is further complicated when it occurs in differing degree on different Saturdays and without previous notice to the plant manager. Absentees from work reduce the productive output not only on their own account, but also often handicap the work of others with which their own work is interrelated. If a considerable

number from one department are absent simultaneously, the department may be unable to function at all.

Furthermore, working morale is usually and naturally at lower ebb on Saturdays than on other days. A week of work is behind and only a few hours remain before the week-end freedom begins. Work is therefore apt to be performed in a more perfunctory and preoccupied manner, as the worker is preoccupied with plans for the week-end. The tendency for groups of employees to indulge in conversation is greater than usual; general plant discipline is relaxed; production suffers and, simultaneously, unit costs increase.

It is no wonder, therefore, that any new plan which gives promise of accomplishing a greater weekly operating efficiency should receive serious consideration. Some employers who use the five-day work week schedule were, even prior to its introduction, convinced that the change could be made without serious loss of production; and information furnished to the Conference Board indicates that their expectations were generally realized. Others anticipated some loss of output and experienced it, but are nevertheless satisfied with the new arrangement. They believe that the manifold advantage in not attempting to operate the plant a half day on Saturday compensates for whatever decrease in productive output results. They see also the added advantage of more satisfactory performance of maintenance and repair work in and around the plant during the full sixth day of the week, without interference with or by the regular production work. This consideration naturally carries more weight in some industries than in others. In some, outside of an occasional breakdown and maintenance work of a routine character, little difficulty is encountered in keeping the equipment in good running order; in others, definite time must be set aside each week for a thorough cleaning and overhauling of the machinery.

An entire free week-day, with the plant shut down, offers an ideal opportunity for this thorough overhauling. Delays incident to giving preference to production work are eliminated, and the maintenance crew can proceed with the efficient performance of its work as the sole consideration.

Aside from all these reasons, a potent factor in the adop-

tion of the five-day week in certain industries is its connection with Jewish religious practice. The orthodox Jew is forbidden to perform work on the Hebrew Sabbath, which extends from sundown on Friday to sundown on Saturday. Although economic necessity of conforming to existing conditions of life and labor and the tendency toward a more liberal interpretation of orthodox principles have resulted in wide-spread disregard of the religious precept, the more orthodox members of the race, particularly the religious leaders, have seen in the advent of the five-day week an opportunity to re-establish the strict observance of the faith, and consequently have lent strong support to the movement for the shorter work week.

It has already been remarked that the earliest instance of five-day week operation discovered in this survey owed its origin to a desire to observe the Hebrew Sabbath. It has also been noted that a considerable majority of the instances of five-day week operation were found in the vicinity of New York City, which contains probably the largest urban concentration of Jewish population in the world. Furthermore, most of the companies in New York that observe the five-day week are in the garment industries, in which Jews predominate both in the managements and among the employees. It is evident, therefore, that its relation to the prescribed observance of a cardinal requirement of the Hebrew religion has been an important factor in the growth of five-day week operation and is likely to continue to stimulate its spread in the future.

The Length of the Working Day

The assumption is made by many persons that a five-day-week schedule of work necessarily means a 40-hour work week. This linking of the two is probably due, in the main, to the fact that they have been combined in the demands of organized labor, and also because the Ford Motor Company operates on this weekly work schedule. But there is no more inherent reason why the five-day week should be limited to forty hours than that the five-and-one-half or six-day week should necessarily consist of forty-four or forty-eight hours. As a matter of fact, outside of a few industries

in which the workers are closely organized in labor unions, a longer than 40-hour work schedule is frequently found in connection with the five-day week. It appears to be quite as common a practice, if not to retain the same number of hours in the week as formerly, to reduce them only slightly and to distribute the total work hours over five days in the manner which would work out most satisfactorily in each individual case.

Table 6 presents an analysis of the changes in work hours per week in 219 of the 270 establishments that have introduced the five-day week. Thirty-six companies reported that the five-day week had been in effect in their establishments since they had been in business, and these, with fifteen others that did not report their hours of work, have been omitted from the tabulation.

TABLE 6: COMPARISON OF WEEKLY HOURS OF WORK IN 219 ESTABLISHMENTS BEFORE AND AFTER INTRODUCTION OF FIVE-DAY WEEK

(Source: National Industrial Conference Board)

Six-Day Basis		Five-Day Basis Plants Operating Specified Hours per Week																	
Hours per Week	Plants	35	37½	40	42	42½	43½	43¾	44	45	45½	46	46½	47	47½	48	48¾	49½	50
55	7	..	..	..	..	..	..	..	1	..	..	..	..	..	..	5	..	..	1
54½	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
54	4	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	2
53¾	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
53	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
52½	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
50	11	..	..	..	..	1	..	..	..	7	..	..	..	..	1	1	..	..	1
49½	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
49⅙	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
49	4	..	..	..	..	1	..	..	1	1	..	..	..	1	..	..	..	..	..
48	64	..	..	8	..	..	..	1	16	4	..	14	..	2	4	14	..	1	..
47½	2	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..
47	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..
46½	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
46	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
45½	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
45	2	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
44½	2	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
44	107	..	..	94	1	1	1	2	8	..	..	..	..	..	..	..	..	..	..
43½	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
38	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total..	219	1	1	104	1	5	1	3	27	19	1	15	1	3	6	23	1	2	5

The tendency to reduce the total number of work hours per week upon the introduction of the five-day week is apparent from this table. It shows that prior to five-day operation a 44-hour week was effective in the largest number of plants covered, followed in order by the 48-hour and the 50-hour week. Under the five-day schedule, the 40-hour week became the most generally adopted plan, followed by the 44-hour and 48-hour schedules. Organized labor was undoubtedly instrumental in effecting the changes to the low classifications, since changes of this character occurred mainly in the highly unionized industries.

According to the information obtained and here recorded, five companies were working a 50-hour week on a five-day basis. Sixty-eight companies, or about 31%, were operating more than forty-four hours, but not over forty-eight hours, per week. If the small union establishments were omitted, the majority of companies with five-day working schedules would be found in this latter group, and it is between these limits that are likely to be found most of the plants which change to the five-day week.

That the change to the five-day week does not necessarily involve a reduction in the total number of hours of work per week unless the weekly schedule on a five-and-one-half or six-day basis is above fifty hours, and unless legislative restrictions on hours exist, is evident from the fact that twenty-seven, or 12%, of the companies covered in Table 6 effected the change without a reduction in total hours, and three companies even increased their working hours slightly. While in some cases rather sharp reductions in total working hours per week were made, in many instances the reduction was small and is to be accounted for largely by adjustments to secure working days of uniform length under the five-day schedule.

This process of adjustment has been worked out in different ways by different companies. The problem, of course, is to spread the former Saturday hours, or as many of them as are to be continued, over the five other days in such a way as to cause the least inconvenience and to be most generally satisfactory. As a rule, this additional time has been added at the beginning of the work day and at the expense of a

shortened lunch period, but has rarely been added at the close of the day. When it is not convenient to have five days of equal length, there is a tendency to make the Friday work schedule a little shorter than that of the other days. Some companies, however, prefer to have five equal days, even when they result in such unusual lengths as nine hours and twelve minutes or nine hours and thirty-six minutes. Table 7 reproduces the daily work schedules of 194 plants operating on a five-day basis, and indicates the variety of daily work schedules in effect.

TABLE 7: ANALYSIS OF WEEKLY WORKING SCHEDULES OF 194 ESTABLISHMENTS OPERATING ON FIVE-DAY WEEK

(Source: National Industrial Conference Board)

Total Weekly Hours	Number of Plants	Length of Working Day in Hours and Minutes				
		Monday	Tuesday	Wednesday	Thursday	Friday
35	1	7.00	7.00	7.00	7.00	7.00
37½	1	7.30	7.30	7.30	7.30	7.30
40	104	8.00	8.00	8.00	8.00	8.00
42	1	8.30	8.30	8.30	8.30	8.00
42½	5	8.30	8.30	8.30	8.30	8.30
43½	1	8.45	8.45	8.45	8.45	8.30
43¾	3	8.45	8.45	8.45	8.45	8.45
..	8	9.00	9.00	9.00	9.00	8.00
..	6	8.45	8.45	8.45	8.45	9.00
44	2	9.00	8.45	8.45	8.45	8.45
..	2	8.50	8.50	8.50	8.50	8.40
..	2	8.48	8.48	8.48	8.48	8.48
..	1	8.45	8.45	8.45	9.00	8.45
45	13	9.00	9.00	9.00	9.00	9.00
45½	1	9.00	9.00	9.00	9.00	9.30
..	5	9.15	9.15	9.15	9.15	9.00
46	3	9.12	9.12	9.12	9.12	9.12
..	1	9.00	9.15	9.15	9.15	9.15
47	2	9.30	9.30	9.30	9.30	9.00
..	1	9.25	9.25	9.25	9.25	9.20
47½	5	9.30	9.30	9.30	9.30	9.30
..	12	9.36	9.36	9.36	9.36	9.36
48	3	9.30	9.30	9.30	9.30	10.00
..	2	9.35	9.35	9.35	9.35	9.40
..	1	10.00	10.00	10.00	10.00	8.00
48¾	1	9.45	9.45	9.45	9.45	9.45
49⅙	2	9.50	9.50	9.50	9.50	9.50
50	5	10.00	10.00	10.00	10.00	10.00

Limitations Imposed by State Statutes

A desired distribution of working hours over five days of the week may encounter limitations imposed by state

statute. In New York State, for example, the present law governing the employment of women in manufacturing industries, which became effective January 1, 1928, prescribes as a maximum an eight-hour day and a 48-hour week, except that when a half-day only is worked on Saturday a maximum of nine hours is allowed on five days, and four and one-half hours on Saturday, making a total of forty-nine and one-half hours for the week. An additional allowance of seventy-eight hours overtime per year is made. It is apparent, therefore, that industries employing considerable numbers of women would be unable, in New York State, to arrange daily working schedules in excess of nine hours without recourse to the overtime allowance, and it may be necessary to conserve this overtime for emergency needs. Table 7 shows that on this basis the five-day schedules of forty-four of the 194 companies listed would be illegal in New York State for companies employing women.

That this difficulty is not imaginary but very real is shown by the fact that nine instances of abandonment of the five-day week in New York State were noted during this investigation as having been caused by the law described. These companies found the forty-five hours per week allowed by the law for five days' labor inadequate for their production needs, and reluctantly reverted to the five-and-one-half day schedule. In all except one of these cases, the total weekly schedule of hours was below the maximum of forty-nine and one-half hours permitted by the law, but it could not be compressed into five days without exceeding the maximum daily allowance.

Some companies have combined a reduction in the number of hours per week, as necessitated by law, with a distribution of the overtime allowance over the year, and have worked out a schedule which, if not entirely satisfactory, suffices to permit the continuance of the five-day week. One such company, upon learning the effect that the present law restricting the working hours of women would have upon its five-day schedule, took the matter up with the state legislature. A letter from the president of the company to a member of the legislature contains this history of the company's experience with the five-day week:

"During the summer of 1920, in order to give our employees an opportunity of enjoying non-employment on Saturday as well as Sunday during the hot summer weather, we changed our working schedule to five days a week instead of five-and-one-half as formerly, increasing the schedule of the five days to 9 hours and 35 minutes, or 47 hours and 55 minutes a week. This schedule met with so much favor with our employees that when in the Fall we proposed to resume the regular working schedule, we received a practically unanimous petition from the employees to continue the same schedule during the winter months also.

"Under the provisions of the present law we understand that we are only permitted to work nine hours on account of the employment of women, who represent the majority of our employees at the present time, and we have been appealed to by all of our employees to do our utmost to have the present schedule, which has now been in existence for approximately eight years and is very much favored by every one of our employees without exception, continued. . . . From a material point of view it is quite indifferent to us whether we work the 48 hours a week in five-and-one-half days instead of in five days, and we are merely urging the privilege of continuing the schedule as we are now doing for the benefit of our employees."

Corroboration of the employees' attitude is contained in a letter from the President of the Employees' Aid Society of this company to the Speaker of the State Assembly:

"At a meeting of the Employees' Aid Society of this company, a resolution was voted on and adopted to petition the Assemblyman and Senator of this District to ask for an amendment to a Bill passed by the House in the last session, known as the Mastick Bill. This Bill is unfair and restrictive to our female workers, as it limits the hours of labor not to exceed 9 hours per day. This will be a hardship to a great many industries who are now working 48 hours in 5 days. We are working that plan here since 1920 and the workers at the meeting mentioned were up in arms against any proposed change that will take away their Saturday holiday.

"We are working 9 hours, 35 minutes per day, which makes 47 hours, 55 minutes per week in 5 days. This ideal way of working gives us all day Saturday and Sunday for rest and recreation. We have a great many married women and widows with children working here who have assured me that if we have to work on Saturday they will have to give up their positions with us as they now use Saturday and Sunday to clean up their homes and prepare for another week.

"We would also draw your attention to the fact that this Bill calls for a 49½-hour week, as 9 hours per day and 4½ hours on Saturday make a longer week than we are now enjoying. I would ask you to use your influence with our Assemblyman and Senator to see that this

Bill is amended before the Legislature adjourns as this vitally affects about 800 workers of ——— and one of ——— largest industries. We are more than pleased with our present way of working and ask you to help us in our effort to continue our present working schedule.

Respectfully yours,

——— Company
Employees' Aid Society
President."

This company, upon failing to obtain relief from the legislature, worked out a schedule for continuing the five-day week by shortening their weekly total hours and using overtime allowance. Other companies could not find in this method a solution of their difficulty and returned to a five-and-one-half-day schedule. Without exception, these companies voiced their approval of the five-day week operation and its popularity among their employees, but found it impossible to reconcile their production requirements with the restrictions of the law.

This situation suggests that over-rigidity in restrictive legislation can work to the disadvantage of the very group it is intended to benefit. It probably did not occur to the framers of the statute in question that, in thus limiting the maximum hours that women could work, they were legislating some women out of a free Saturday and preventing others from obtaining it. There is grave doubt whether any of the physical, social or economic advantages urged in favor of the so-called 48-hour law for women would not have been served better had this law provided the reasonable latitude that would permit the distribution of the forty-eight hours over five days, if desired. Legislation assumes the prerogative of exact science when, in effect, it asserts that nine hours rather than nine hours and thirty-five minutes constitute the maximum number of hours per day that a woman can work with out detriment to health.

The number of hours to be worked per week in case of change to a five-day schedule is a matter of great importance. If the change to a five-day basis can be effected without disturbing the total hours of work per week, two problems that are really troublesome are avoided altogether—that of the number of hours which would otherwise have to be dropped

from the former weekly total, and that of the adjustment in wage rates necessary to compensate for this lost working time. Inability to arrive at a satisfactory answer to these questions is likely to be the chief stumbling-block in the way of those who are seriously and sympathetically considering the adoption of a five-day week schedule.

Adjustment of Wage Rates

Consideration of the five-day week inevitably brings up the question of its effect upon wage scales and upon the earnings of the workers affected. When no change in total hours per week is involved in the changed work schedule, the wage question does not enter, but if so much as a half-hour is dropped from the weekly total, the problem of adjustment becomes an important issue. The decision in this matter may rest with the employer, it may be arrived at by joint agreement between management and employees or, in the case of unionized industries, it may be practically dictated by the labor union.

In a number of the union trades in which the five-day week schedule is prevalent, wage scales had already been established upon a weekly basis before the shortened weekly work schedule was adopted. The change to the five-day basis, which usually involved a reduction of several work hours in the weekly schedule, was negotiated with the understanding that weekly wage scales would remain unchanged. This, in effect, amounted to an increase in the wage scale to permit the earning of the same amount in a shorter work week as was formerly earned in a longer one.

When the decision governing wage scales is not affected by outside influence, diverse policies prevail. The wage payment system already in force is an important factor in the situation. Where employees are paid on the hourly rate basis, no effort for increased production on their part can make up for their wage loss through reduction in the number of hours per week, since it is the hourly rate multiplied by the hours worked that determines their weekly earnings. Where, on the other hand, piece work or a premium or bonus system of wage payment is in effect, the employee has some measure of control over his earnings and, conceivably, can increase

them by additional effort and application. Consequently, the need for wage adjustments would seem greater in the case of employees on hourly or weekly wage rates than in cases where incentive wage systems are in force.

One hundred and fifty-one of the 270 establishments studied gave information regarding the way in which the wage problem had been handled at the time of the shift to the five-day week. Sixty-two, or 41%, reported that since no material change in total hours per week had been made, no adjustment in wages had been necessary. Of the remaining eighty-nine, or 59%, that had reduced the working hours per week, it was found that fifty-three companies had adjusted wage rates to permit the earning of as high wages under the shortened schedule as had formerly been earned under a longer one, and twenty-eight had made no wage adjustment to compensate for the shorter working schedule. Three of the remaining eight plants had made a wage adjustment that partially compensated for the lost time, and five plants had increased hourly rates but had made no change in piece rates. It appears, therefore, that in round numbers employees in 75% of the companies which furnished information on this subject did not suffer loss of wage income from the change to the five-day schedule.

Overtime Arrangements

The companies found to be operating on a five-day weekly schedule did not, as a rule, find overtime work necessary. Some employers, whose establishments were unionized, stated that overtime was forbidden by union regulations, and that they could not, therefore, operate their plants overtime even if they wished to do so. One employer explained that for some time there had been overproduction in his industry, in which a year's requirements could easily be manufactured in 250 days, and that the five-day week had been quite generally adopted as a means of spreading the year's production over fifty weeks. In consequence, even at times of peak demand, overtime work was considered undesirable as well as unnecessary.

On the other hand, seventy-nine establishments, or a little less than one-third of the total number of plants covered, had

seen at one time or another a need for overtime work on Saturday. This, in turn, raised the issue whether such time should be paid for at straight rates or at rates in excess of the normal rates. In fifty-one, or nearly two-thirds of these establishments, Saturday work was placed in the same category as other overtime work and was compensated at higher than normal rates. In twenty-four, or about 30% of the plants, Saturday work was not considered strictly as overtime work and, consequently, the regular wage rates remained in force. Two of the remaining four plants paid overtime rates to those on an hourly rate basis, but did not increase piece rates. The other two plants paid regular rates for Saturday work until the total number of hours that had constituted the work week prior to the change to the five-day schedule was reached, and paid overtime rates for work beyond this point. Thus, in the case of a plant that had in changing to the five-day week reduced its weekly hours of work from forty-eight to forty-six, the first two hours of Saturday work would be paid for at regular rates, but overtime rates would be paid for any work in excess of these two hours.

The proportion by which overtime rates paid for Saturday work exceed the regular rates is not essential to this study, since the important point is whether or not Saturday work was considered in the same category with other overtime work in plants operating on a five-day schedule. As a matter of fact, however, time and one-half was paid in a majority of the fifty-one plants that reported the payment of overtime rates for Saturday work, and a number of instances of payment of double time was noted.

Application of the Five-Day Schedule to Office Employees

The adoption of the five-day schedule in an establishment does not ensure the extension of this schedule to employees in the plant office. Prevailing practice appears to favor keeping the office force at work on Saturday forenoons. Reasons that may make advantageous the restriction of factory employment to five days a week do not necessarily hold with equal force when applied to the office staff. Furthermore, it may for business reasons be quite necessary to operate the

office during the time when the offices of a majority of other companies are operating. In many instances, shipping departments are kept running on Saturdays in order not to delay deliveries, and for similar reasons receiving departments may be operated, or all offices of a company be kept open for business on Saturdays. Table 8 gives a classification of the policies of 121 companies with regard to this matter.

TABLE 8: DISTRIBUTION OF 121 COMPANIES WITH REGARD TO POLICY OF GRANTING FIVE-DAY WEEK TO OFFICE FORCE AS WELL AS TO FACTORY EMPLOYEES

(Source: National Industrial Conference Board)

Policy	Working under Union Agreement	Not Working under Union Agreement	Total
Five-day week does *not* apply to office force...	25	45	71[1]
Five-day week applies to office force:			
On same basis as factory employees.....	8	29	37
Half of staff on alternate Saturdays.....	..	1	1
Women every Saturday; men alternate Saturdays.....	..	1	1
Few employees always present on Saturday.	..	4	4
Entire staff during summer months.....	1	3	4
Half of staff on alternate Saturdays during summer.....	1	2	3
Total.....	35	85	121[1]

[1] The labor policy of one company not classifiable.

In more than half of these companies it is seen that the five-day week does not apply to the office force under any circumstances. Thirty per cent of the companies make no distinction between office and factory, and the five-day schedule applies to employees in both throughout the year. The remaining 11% of establishments, while not considering that the five-day week necessarily applies to office employees, make certain concessions in the form of free Saturdays during the year. Among these plans are the following:

To release half the office staff on alternate Saturdays.

To release half the office staff on alternate Saturdays during the summer months only.

To release women employees in the office every Saturday, and men employees alternate Saturdays.

To close the office on Saturdays during summer months.

To retain only a skeleton force of key people on Saturdays.

These variations appear to indicate a desire to extend the privilege of two free days at the end of the week to as large a proportion of the total working force as possible, but also a recognition that, since the prevailing practice throughout the business world is to include Saturday forenoon as a business day, it is important to have the company offices open at that time and in a position to meet any demands made upon them.

Failure of the union-enforced five-day week to make similar provision for the office workers is indicated by the fact that, in 71% of the union establishments that furnished information, the office staff worked on Saturday the year around, as compared with 52% of the companies not working under a union agreement. The five-day schedule was rarely made applicable to sales or executive offices located away from the plant, although in a few cases free Saturdays were granted during the summer months.

It appears from the data discussed in this chapter that there is as yet little that can be called established practice in the methods or technique of five-day week operation. Some companies are subject to union agreements and can not exercise their unrestrained discretion. In the case of other companies, legislative restrictions sometimes impose conditions that must be taken into account. Beyond this point, or in the absence of such limitations, the policy of each company is guided by conditions in the industry and in the individual establishment. That the solutions of the problems involved in the change to five-day weekly operation fall into a few generally similar categories indicates both the substantial similarity of the questions involved, regardless of location or industry, and the ability to arrive at equitable solutions if there is the desire to put the shorter weekly work schedule in effect.

CHAPTER IV

EXPERIENCE WITH FIVE-DAY WEEK OPERATION

GENERAL satisfaction with the five-day week on the part of managements operating on this work schedule might be assumed from the fact that after trials of from one to twenty years it is still in effect. But this argument alone is hardly convincing. While the introduction of such a program is likely to be effected without appreciable opposition on the part of the working force, a return to a five-and-one-half or a six-day schedule, after employees have become accustomed to two free days a week, may well be expected to meet with resistance of the workers. And in the case of companies that have adopted the shorter schedule to avoid conflict with strongly entrenched labor unions, a return to the longer work schedule is practically out of the question. Consequently, any conclusion as to whether or not employers who have had experience with the operation and effects of the five-day week are generally satisfied with it as a permanent working schedule must rest upon more positive grounds than its mere continuation.

Effect upon Production

Probably first in the mind of the practical operating executive is the question of the effect upon production of the change to a five-day week. This is a difficult question to answer definitely. Except in a few isolated instances, it probably may be properly assumed that whatever changes have occurred in the volume of output since the change in working schedule took effect have been influenced by a number of causes and are not necessarily attributable solely to the change to the five-day week schedule.

Less than half of the companies operating on a five-day basis were willing to make any statement as to the effect upon production. Most of the remaining companies claimed

not to know what the effect had been. This lack of information was apparently due not to a failure to keep records, but rather to recognition that other changes in conditions had taken place which largely invalidated comparisons. In some cases, the character of the product had been changed materially on account of shifting styles or demand; in others, substantial changes in manufacturing processes had been or were being made, sometimes as a result of the adoption of the five-day week and sometimes independent of it. These changes made output comparisons inaccurate, if not entirely futile. In still other cases where results might have been comparable, no attempt had been made to ascertain how production under the five-day week schedule compared with the former output under a longer work week.

TABLE 9: WEEKLY OUTPUT UNDER FIVE-DAY SCHEDULE COMPARED WITH OUTPUT UNDER FORMER FIVE-AND-ONE-HALF AND SIX-DAY SCHEDULES, 127 COMPANIES

(Source: National Industrial Conference Board)

Changes in Hours	Changes in Output									
	Substantially Less		Less in Proportion		No Change		Increase		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Reduction	6	6.4	24	25.4	46	49.0	18	19.2	94	100
No change	1	3.1	..	..	17	53.0	14	43.9	32	100
Increase	..	..	..	..	1	100.0	..	..	1	100
Total	7	5.5	24	18.9	64	50.4	32	25.2	127	100

Table 9 presents a classified analysis of the effect of five-day week operation upon production as reported by 127 companies. Of ninety-four companies that had reduced the total hours of work per week in changing to the five-day schedule, approximately one-quarter claimed that production had declined in about the same proportion. Six companies reported a substantial loss in output, while forty-six companies saw no appreciable change. On the other hand, eighteen companies reported that production had increased. Since the hours of work per week of this group had been reduced in changing to the five-day schedule, it appears that

nearly 70% of these companies have suffered no loss in total output per week and are, therefore, obtaining greater production per hour than under the longer working schedule. Unless wage scales were substantially increased, this seems to indicate that management has not lost through the change, and is actually operating with a lower unit cost of output.

Of thirty-two companies in which weekly hours were maintained, more than one-half found production the same under the five-day as under the longer schedule, and fourteen noted an increase in output. Only one company reported a loss in output, and this would seem to have been caused by reasons other than the change in working schedule. The single company that reported an increase in hours had discovered no increase in output.

Considering these companies together, without regard to changes in total hours per week resulting from the adoption of the five-day week, it appears that an almost even half found weekly production unchanged, and another quarter noted an increase. How much of the maintenance or increase in output, especially in those plants in which the hours of work per week had been reduced, was due to better management methods, including better processing, and how much to more active cooperation and application on the part of the working force, it is difficult to say. Undoubtedly both have been factors in accomplishing the desired result and have demonstrated that maintenance of production can be accomplished on a considerable scale.

The data presented reveal other significant facts. More than half of the plants in which production declined in proportion to the reduction in weekly hours are now operating on a union-enforced 40-hour week. Only one company works as long a schedule as forty-seven and one-half hours per week. Companies that adopted the five-day week as a result of union agreements, which also provided that weekly wages remain the same in spite of reduction in weekly hours of work, are thus the chief sufferers from loss of production. This result seems natural, since under these conditions there is no incentive for producing at any more rapid rate than before the change in working schedule. On the other hand,

less than 10% of the plants that reported maintained or increased production are in the 40-hour per week group. As a rule, plants in which production was maintained or increased were the larger ones, and reduced output was reported by the smaller establishments.

Character of product or nature of process, although less important than management, have no doubt something to do with the effect upon production of a reduced work schedule. A clothing establishment employing 250 workers shortened its work week from forty-eight to forty hours in changing to the five-day week, and reported a decrease in output approximately equivalent to the eight hours productive time lost. A larger company manufacturing paper products made a similar reduction in hours of work but found a decided increase in the weekly volume of output. A third company reduced its weekly working schedule by eleven hours and still found weekly production increased, while in a fourth company the shortening of the work schedule by one hour per week resulted in a lower output per week.

One company, with a product which permits an accurate standard of comparison, gave the following results for the period since the adoption of the five-day week, with the statement that this change must not be considered necessarily attributable to the shorter working schedule. It is apparent, however, that the reduction in hours per week from fifty-five to forty-eight did not seriously affect efficiency of operation. The figures given are as follows:

VALUE OF PRODUCT SHIPPED PER DOLLAR OF WAGE COST

1920	$5.11
1921	5.10
1922	6.40
1923	7.00
1924	7.26
1925	8.77
1926	9.69
1927	9.60
1928 (First half year)	9.71

Contradictory experiences are a warning that too much stress may easily be placed upon the supposed effect upon production of a change in the working schedule. Apparently, the adoption of the five-day week has been responsible alike

for the increase, the decrease and the maintenance of production. Actually, the five-day week has probably had no effect in some cases, while in other instances, by acting as a stimulus to both management and employees to ensure its continuance, it has indirectly been the cause of effecting economies and improvements that might just as well have been discovered and made effective earlier. In such cases the five-day week schedule has become the beneficiary of efforts that might as well have been inspired by another cause.

Operating Economies

It is somewhat difficult to distinguish between effect upon production and effect upon operating economies resulting from the adoption of the five-day week, since the two are closely linked. However, there are certain obvious possibilities for economy that are not directly connected with any change in production.

The saving from the shorter weekly working schedule most frequently mentioned was reported by plants operating their own steam power plants. While no quantitative savings in fuel were given, the statement was repeatedly made that banking the fires on Friday night without the need of bringing them up on Saturday morning had effected an appreciable saving in coal consumption each week. This was particularly marked in the winter months, when heat as well as power was furnished. Almost equal emphasis was given to the advantage of devoting full Saturdays to maintenance and repair work. The value of this uninterrupted period for a general tuning-up of equipment is being felt with increasing force, if one may judge from the reports received. While it had been the general practice in many plants to make periodic, usually weekly, inspections and repair of apparatus and plant on Sundays or Saturday afternoons, this work had often necessarily to be performed under difficulties that rendered it next to impossible to make any but the most obviously necessary repairs. But when this maintenance work could be performed without pressure, it was found that adjustments could be made and incipient troubles detected and corrected before they reached an advanced stage, with the result that stoppage of production due to mechanical failure during the

week became a rarity. The reports from some companies mentioned this practical elimination of machine failures as an important reason for their ability to maintain or increase production in spite of a shorter working schedule per week.

Probably this freedom from machine breakdowns is most appreciated in the continuous process industries. The statement of a paper manufacturer shows the value of sufficient time for repair work:

> "For the greatest efficiency a paper machine must be run from Monday to the week-end without stopping. Any shut-downs cause partial idleness in each department and to avoid these shut-downs all equipment must be maintained in perfect condition. Under the six-day week all clean-up and repairs were supposed to be done on Sunday when everyone wanted to get through in a hurry, resulting in many cases in temporary makeshifts which again would break and cause further shut-downs during the week."

Attention was also called to the economic loss due to the time required in starting and closing down a plant, which in some industries is a considerable item. For example, in the printing and lithographing industry, which has adopted the five-day week extensively, the process of oiling and cleaning the presses at the beginning of the day and the wash-up at the end of each day's run frequently take as long as an hour. It is obvious, therefore, that the fewer are the days into which production work can be compressed, the smaller will be the proportion of non-productive time. Similarly in other industries, though usually in less degree, the time lost each working day because of special preparations necessary for starting the production process indicate the saving that could be effected by reducing the days of operation from six to five each week, if productive requirements permit.

Punctuality and Attendance

The effect of the five-day week in stimulating regularity in attendance and promptness in reporting for work was commented upon by a number of employers as by no means the least of the advantages resulting from the shorter work schedule. Poor attendance on Saturday mornings had become habitual in many of these establishments, and was

particularly marked during the summer months. But with the shorter work week, especially where hours of work had been reduced without adjusting wage scales, there was a natural desire to capitalize to the full all available working hours. That decided improvements in attendance had taken place was mainly attributed to the five-day work schedule, as is apparent from a few quotations from letters:

> "The change to a five-day week was made because of the desire to provide more leisure for our working force, and it might also be interesting to you to know that our production increased since the installation of the five-day week without additional force; also that our rate of illness has decreased about 30% and our rate of lateness has decreased about 80%."
>
> "Under the old schedule it was noticed that our list of absentees was larger, especially on Saturdays, which we attributed to the shorter day."
>
> "There is a noticeable reduction in lateness and absence."
>
> "We have many married women who need more time for shopping and housework. Under the old system our attendance was bad on Saturday and we never received a half-day's work. Now our attendance is perfect and our labor turnover is less than one per cent per month."

Labor Turnover

The effect upon labor turnover has for years been the test applied to various devices for stimulating efficiency. It has been used as a kind of infallible and conclusive indicator of their adequacy and success. This barometer of industrial health and good-will has become sanctioned by long usage, yet it is difficult to accept this criterion, either as necessarily conclusive or as possible of exact measurement. Without entering upon an extended discussion, it may be suggested that complete elimination of labor turnover in a plant might be more of a calamity than a boon, and that reduction of excessive turnover in this period of rapidly changing conditions within industry is probably due to the inter-play of so many factors that it would be difficult to isolate the fair proportion of reduction caused by any single agency.

Where, however, conditions in an industry or in a single establishment have been such as to make the work so unde-

sirable as to cause excessive change in the labor force, it is conceivable that the introduction of the five-day week might well make such work more attractive by holding out the reward of an extra free day each week. The introduction of the five-day week, coupled with a general improvement in working conditions, has resulted advantageously in the case of a paper-board plant:

> "The industry was in the first place overproduced, and the working conditions in the mills were very bad. In the board mills the only labor which was attracted to this unwholesome work was of a very low caliber. By remedying these conditions, shortening the hours and restricting operation to five days a week, we thought that the whole problem would be simplified and production per capita increased. This has to a great extent proved correct."

So long as five-and-one-half or six-day operation is the rule, an advantage in competing for desirable labor will come from five-day operation. It has been brought out frequently in this study that employees generally react favorably to this plan, even when it entails longer hours on the five working days. Other conditions being approximately equal, therefore, the plant with the five-day week will appear as a more desirable one in which to work and consequently will exert a better hold on the working force, as it will also more readily attract new workers.

Another consideration affecting labor supply applies particularly to industries that employ large numbers of women. In many establishments, married women are preferred because they are considered steadier and more permanent employees. The five-day week attracts such women to industrial employment because an entirely free week-day gives them time to perform their domestic duties, while adding to the family income by working outside the home the other five days.

Other Advantages

In the general summing up of the benefits believed to have been derived from five-day operation, employers mentioned a number of points that, while not determining influences, have at least been noted with considerable satisfac-

tion. Thus, several companies pointed to the real advantage of a reserve of possible working hours on Saturdays in case of emergencies. While averse to such overtime as a regular arrangement, the possibility of making their working schedule more elastic when necessary gives them confidence that they can meet whatever situations may arise.

"Employees with more time to buy things work harder for money to buy with, and also seem to strive more toward education, comforts, etc.," is the experience reported by a textile finishing company. This statement tends to bear out the sociological argument that greater leisure stimulates the cultivation of the means that make possible its greater enjoyment. But while some employers think that employees are spending more as a result of the free day, others believe that they are saving more. A textile manufacturing company that introduced the five-day week in 1921 reports:

> "Deposits in savings fund managed jointly by employees and company have shown steady increase from year to year, amounting at present to approximately $275 per depositor with an average of about 60% of employees participating."

The effect of a longer period of leisure and relaxation each week upon working efficiency was pointed out by several employers, although others could see no change. Typical of the remarks of those who noted a difference are the two following quotations:

> "Efficient working pitch better maintained by concentration into fewer days, with proper rest intervals to relieve any strain of longer daily hours when nature of work makes this desirable. Reduced need for days off or lengthy vacation periods."

> "Greater relaxation over the week-end gives added pep to week's work."

Undoubtedly, the most novel and distinctive adaptation of the five-day schedule is reported by a manufacturer of aircraft instruments and equipment:

> "One of the outstanding advantages results from the fact that we shift the working days in any week where a holiday falls on a Tuesday or Thursday, transferring the work day from Monday or Friday to

Saturday. This provides throughout the year from five to ten long week-ends, i. e., a period of no work for three or four days. Everyone finds this highly desirable and beneficial."

To illustrate this plan by an example: Christmas Day in 1928 fell on Tuesday. Instead of keeping the plant open on Monday, the twenty-fourth, and closing as usual on Saturday, the twenty-ninth, the plant was closed on Monday, giving everyone a work vacation from the preceding Friday night until Wednesday morning. The time lost on Monday was made up by operating on Saturday of that week. Or, in the case of Thanksgiving, the plant was operated on the preceding Saturday and remained closed on the Friday and Saturday following Thanksgiving Day.

Disadvantages and Objections

Although nothing but advantages of five-day week operation have so far been presented, objections have also been pointed out by those who have had experience with it; but it appears that these objections are fewer and, as a rule, less fundamental in character than the advantages cited.

The attitude of employers operating a five-day schedule but considering it disadvantageous seems to be strongly influenced by whether or not the five-day week was introduced with their full approval or was forced upon them by organized labor. It is natural that they should resent a program they have been compelled to accept, and that they should magnify its shortcomings, just as on the other side there may be a tendency to minimize the disadvantages of a plan which has been voluntarily introduced. Some union-shop employers declared themselves satisfied that the five-day schedule is desirable, but others made no attempt to conceal their disapproval of a program of fewer hours of work at unreduced pay, which they view as little short of confiscation, and have been outspoken and caustic in their criticisms. One small-shop proprietor remarked:

"The only advantage is a benefit to the union. Employees do not produce the work they are capable of for the reason that they want to get in additional overtime for which we must pay time and one-half."

The criticism of another union-shop proprietor was in much the same vein:

> "Less work and the same pay. Our cost of production increased, thereby causing almost all of the big out-of-town buyers to go to factories located in small towns with cheaper labor, to buy their goods."

When employers had voluntarily decided to change to the five-day week, whether or not the idea originated with the employees, some found certain disadvantages in the shorter schedule, but they tended to view these as drawbacks such as are likely to be a part of any innovation, rather than as handicaps imposed upon them against their will. Thus, a manufacturer of automotive equipment found certain practical difficulties, which did not, however, appear to him insurmountable.

> "There is the problem of convincing an occasional customer, who comes in at the eleventh hour with an order to be shipped Saturday, that Saturday is not in our production calendar."

Another employer with much the same problem—that of receiving goods ordered and shipping rush orders on Saturdays—solved the difficulty by maintaining a small group of about 10% of the force for Saturdays, while still another abandoned the five-day week because "customers required service on Saturday and competition with five-and-one-half day shops made our costs unfavorable."

One employer complained that some of his employees found jobs for Saturdays, such as tending market stands, and that this defeated the purpose of the five-day week, which, by implication, is an extra day of complete rest. There may well be a difference of opinion as to the validity of this objection. It is a well-substantiated view that a change in work often offers as complete a rest as doing nothing. In fact, many employers cited as an advantage of the five-day week that employees could make necessary repairs on their homes, or work in their gardens, and there is considerably more exertion in such work than in tending a market stand, even if it does not bring direct monetary compensation. From this viewpoint, the thrifty employee who adds to his

income by working for wages on Saturdays would not appear to be losing the value of his weekly day of freedom from the accustomed work, so long as the spare-time work is of a different character from that of his regular occupation.

A more serious objection mentioned by a few employers is that the compression of the work week into five days has made these five days too long, particularly in the hot summer months. In one plant, a poorer quality of work was observed, which was attributed to longer working hours under artificial light during the winter months. An employer who approved the five-day week in principle, but had not been able to adapt it to the work in his plant as a regular schedule, had such an objection:

> "We work a fifty-hour week from 7.30 A. M. to 5 P. M. We found that a five-day week would not give us an economical volume production unless we worked a ten-hour day. A ten-hour day with two days a week off would no doubt be satisfactory to some of our men, but there are jobs in our plant at which we feel no man would or should work ten hours daily. The resulting fatigue would so increase the accident hazard that we feel the benefits of a five-day week in such cases are very questionable, not to mention the moral responsibility involved."

This question of long hours is fundamental and is probably the consideration that has deterred many companies from experimenting with the five-day week. Many have found it possible to shorten their weekly schedule somewhat in changing to a five-day basis, some without loss of production, others accepting a certain loss in output. Where such a reduction in total hours does not seem practicable, and where occupational demands are severe, there arises the question as to the desirability of five-day week operation.

The increase in accident hazard due to longer hours, which was mentioned by the employer quoted above, is given but little weight by most employers operating on the five-day schedule. Since accident hazard is understood to increase as fatigue dulls the normal sharpness of perception and reaction, the lengthening of working hours per day might be expected to have some effect. In most cases reported, however, no difference had been observed; in companies whose accident frequency had improved, some credit for this better

condition was given to the extra day of relaxation, but the improvement was credited mostly to other causes, such as intensive safety campaigns and departmental safety contests.

It is dangerous to generalize too much in appraising the relative importance of objections to five-day week operation. Such an infinite variety of conditions obtain in different establishments that what may constitute a serious drawback in one case may be a positive advantage in another. Furthermore, the personal attitude of responsible officials toward the plan may consciously or unconsciously color their expressed opinions and estimates. What seems apparent is that drawbacks to five-day operation have undoubtedly been real, at least in many cases, but that it has generally been found possible to surmount these difficulties if there exists a genuine desire to confine operations to five days a week.

Attitude of Employees and Employers

Judging from information furnished by employers, the vast majority of employees who have had the opportunity to experience for themselves a five-day work schedule in operation appear to be in favor of it. Where the change had been effected without material addition to daily hours of work and without material loss of wages, this attitude was to be expected. Where, however, these factors did not work to the employee's benefit, the advantage of free Saturdays still outweighed whatever inconvenience or loss may therefrom result. Votes among employees have resulted in endorsement of the five-day plan by overwhelming majorities.

A shoe manufacturing company reported:

> "Universal satisfaction. Our workers come to our village from many cities and towns by trolley or automobile. They appreciate the privilege of omitting one round trip and the double rest day. Office and shipping employees wish it were practicable for them also to enjoy the entire Saturday off."

Another company put the case a little differently, and expressed the attitude of employees to the five-day week in this way:

> "They are strongly in favor of it; in fact, prefer to do overtime work at night rather than interfere with the Saturday holiday. It is

our opinion that the person who 'gets up and at it' reasonably early in the morning and sticks to it a little longer in the afternoon, with one full holiday on Saturday, has an advantage over the one who sleeps a little later, quits a little earlier and thus gets his off time in useless driblets."

Frequent allusion was made by employers to the improvement in morale that had resulted from the introduction of the five-day week. Greater zest of employees in their work has been observed as well as a more cordial attitude toward the management. A manufacturer of abrasives reported:

"Enthusiastic approval of over 80% of workers by actual vote. Powerful stimulus to morale. Next to bonus, best continuous effect of anything company has ever done."

A number of employers commented upon the practice of some employees of seeking other forms of remunerative work on Saturdays. While a few employers condemned this practice as destroying the purpose of the extra holiday, or as indicating that employees might just as well be engaged at their regular occupations, other employers applauded it as evidence of thrift and a desire to provide for possible periods of unemployment.

The reasons most frequently given by employees for their appreciation of the free Saturday differed as between women and men. Women found in this day the opportunity to attend to many household duties that otherwise could not be properly performed. Some men saw that they could make necessary repairs on their houses, while others used the day for recreation, such as hunting and fishing expeditions and visits to friends. Automobile trips were popular in the summer, and the morning start helped to avoid the heavy Saturday afternoon traffic.

That the habit of the free Saturday, once formed, is not easy to give up, has been the experience of companies that had introduced the five-day week as an experiment during the summer and had then sounded out the opinion of their employees with regard to its continuance as the permanent working schedule; and also of companies that for one reason or another had abandoned the five-day week. One employer,

located in New York State, gave the following reason for abandoning the five-day week:

> "Because of the passage of the most unpopular law with employees which has ever been forced upon them. We wish members of your organization could walk into our mill and talk to any employee at random, soliciting their viewpoint. The management was better satisfied with the five-day week. A woman is tired with nine hours and fifteen minutes work but she would rather work thirty-five minutes longer and have all day Saturday for herself."

Experience with the five-day week as here recorded appears to have justified the anticipations of employers. This statement is made advisedly. Where employers have expected reduced production, higher costs and lessened efficiency because of a union-enforced five-day week, they apparently have not been disappointed. On the other hand, where the experiment had been made with the hope that it would work out satisfactorily, it usually has done so. Some loss in production and in economy of operation has been accepted by a number of employers, and some loss in earnings has been accepted by many employees without apparently destroying their belief that, so far as they are concerned, the five-day week schedule is desirable.

That the experiment has worked out this way in most of the cases studied does not necessarily mean that it will work out similarly in all cases. Each company has its own problems to consider. A wider adoption of the five-day week will destroy some of the advantages urged in its favor, but will remove greater and more fundamental drawbacks, of which the greatest is probably the competition with companies having a longer weekly working schedule.

CHAPTER V

VARIATIONS OF THE FIVE-DAY WEEK

ALTHOUGH only instances of year-around five-day week operation have so far been treated, reference has occasionally been made to more temporary arrangements. It seems desirable to take cognizance of these because many permanent five-day week plans have grown out of temporary experiments with this schedule, and also because in some industries or localities the temporary five-day week schedule might be practicable when a permanent basis of such operation would not be.

The Five-Day Week in Summer

The most common adaptation of the five-day week is to arrange the summer work schedule on this basis. It has for years been the practice of many mercantile houses to eliminate Saturday work during the summer, frequently as a reward to the employees for working full Saturdays during the remainder of the year. There seems to be a growing tendency in industrial establishments to adopt this practice. Seventy-eight manufacturing companies, in addition to those on an entire year five-day week basis, were found to be operating on a five-day summer schedule.

The motive most frequently expressed for adopting this shortened summer schedule was to reduce strain of work upon employees at the time of year when this strain is most acutely felt. Particularly where quality of workmanship was suffering because of disagreeable and fatiguing working conditions due to the heat, a longer rest period each week was considered as a practical corrective for this condition. Furthermore, a shortened working schedule was looked upon as less of a problem in the summer, because of general subnormal business activity during that period, so that reduced production at that time might prove as much a boon as a disadvantage.

The length of the period during which the summer schedule remained in effect varied considerably. July and August were invariably included, and while in most cases the summer schedule was confined to these two months, instances were noted in which one or more of the months of May, June and September were included.

Among the seventy-eight companies that operated a five-day week summer schedule, there was an almost even division between those that eliminated the Saturday hours altogether and those that spread them over the remaining five days. Some companies felt that it was sufficient to provide for free Saturdays and that the Saturday hours should be distributed through the week, while other employers felt that unless the Saturday hours were dropped altogether the whole purpose of the shorter summer schedule was defeated. In all but two of the establishments under consideration, wage rates had been adjusted, or piece workers had increased their output sufficiently to maintain normal earnings.

A few instances of informal or occasional five-day operation during the summer were found, when, for seasonal or other reasons of light production demand, the plant would not be operated on Saturday. This method of curtailing production had, in the opinion of two employers, proved advantageous as a means of maintaining a fully trained force throughout the year, by preventing extended lay-offs with the danger of permanently losing valuable members of the working force. One company that does not make a practice of closing the plant on Saturday has an understanding with its employees that if their weekly production quota is accomplished by Friday night, they need not report on Saturday. Very few of the employees, the company reported, have found it necessary to work on Saturdays.

Some companies have utilized the long summer week-ends in lieu of vacations for the working force, and feel that this extra time for leisure is just as beneficial when scattered through the summer as when concentrated in one period of a week or more. In one establishment, hourly workers who have been in the employ of the company for at least one year are paid for three of the Saturdays on which the plant

is closed; those with two years' service are paid for six Saturdays; and for each additional year of service, up to ten, payment it made for two additional Saturdays. Employees with ten or more consecutive years of service receive pay for the full twenty-two Saturdays on which the plant is closed during the year.

Intermittent Five-Day Week Operation

The five-day week with a decrease of hours per week and without wage reductions has been used by many companies as a device for reducing production during periods of slack demand or business depression, but such instances hardly deserve consideration in a study of the five-day week as an accepted and regular working schedule.

Obviously, a contraction in the demand for a product usually calls for temporary curtailment of output. Business policy differs as to the best means for bringing about such curtailment. Some executives believe that the plant should continue to operate on full schedule as long as possible, and that reduction in output should be effected by weeding out the least desirable employees. Probably the majority of executives, however, believe it important to conserve their working force in order that it may function promptly when normal operation is resumed. There is also a growing disinclination among them, in a period of general depression, to aggravate a bad situation by adding to unemployment at a time when opportunities for securing other employment are few. Consequently, these executives gradually reduce their hours of operation per week, and the first step in such a reduction is often the five-day schedule. If the business recession or the falling off in demand for production is not severe, they may not consider it necessary to make further reduction in working time.

The duration of the emergency necessitating five-day week operation may be limited, and regular operation may be resumed after only a few weeks or months. On the other hand, there are instances when protracted depression in the industry or a chronic condition of over-production require the retention of the five-day schedule for a number of years. But so long as management does not consider the five-day week

the accepted working schedule and intends to revert to the longer schedule as soon as conditions justify such a step, these work arrangements are "de facto" rather than "de jure" instances of the five-day week.

The Five-Night Week

Although not so widely known as the regular five-day week, the short week schedule applied to night work is older and relatively more general. The reason for its early adoption and its prevalence in establishments that make a practice of operating night shifts is obvious. Since night shifts cover the late part of one day and the early part of the next, work during only five nights each week will obviate encroachment upon Sunday. Furthermore, night work is frequently instituted to meet demands for which ordinary overtime work is inadequate, but which can be satisfied by working five nights in the week.

In another study recently conducted by the Conference Board,[1] it was found that nearly half of the establishments that reported night operation confined these operations to five nights in the week, as shown in Table 10. If from the plants which operated six and seven nights per week those are subtracted whose service or processes demanded continuous operation—namely, chemical, paper and pulp and gas and electricity plants—the five-night group would constitute 65% of the total.

When night work is conducted on the basis of regular rotating shifts, the working hours at night are equal in length to those of the day shifts, but where a fixed night shift is operated, either permanently or as a temporary expedient, there is a tendency toward longer working hours at night than during the day. Table 10 shows a considerably greater tendency toward long hours in night shifts of plants on a five-night schedule than in those working six or seven nights. Some employers expressed the opinion that the efficiency of night crews was impaired when such long shifts were worked, but the majority felt that any undue strain or fatigue that may have resulted was counteracted by the additional leisure provided by the long week-end.

[1] National Industrial Conference Board, "Night Work in Industry," 1927.

Table 10: Hours of Night Work in 202 Manufacturing Establishments, Classified by Industry

(Source: National Industrial Conference Board)

Industry	Five Nights per Week Hours per Night										Six Nights per Week Hours per Night								Seven Nights per Week Hours per Night	
	8	9	9.5 or 9.6	10	10½	11	11½	12	12½	13	7	8	8.6	10	10½	11	12	13	8	12
Automobiles	..	..	..	..	..	2	1	2	..	..	..	1	..	..	..	..	..	..	..	..
Boots and shoes	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Cement—lime—brick	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..
Chemicals	1	..	1	..	..	..	..	3	..	..	..	13	..	..	..	..	1	..	6	1
Electrical manufacturing	..	..	1	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Food	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	1	..	..
Foundries and machine shops	4	2	2	3	..	7	3	15	2	2	..	3	..	..	1	1	..	..	1	..
Gas and electricity	..	..	..	..	..	..	..	..	..	..	..	14	..	..	..	..	..	..	10	..
Glass	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Iron and steel	..	..	..	2	..	1	1	1	..	..	..	3	..	..	..	..	..	..	1	1
Lumber	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	1	..
Oil refining	1	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	2	..
Mining	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Paper and pulp products	..	..	1	..	..	..	..	..	..	..	..	40	..	..	..	..	..	1	..	..
Printing	9	1	1	..	..	1	..	..	..	..	2	5	..	..	..	..	..	..	..	..
Rubber	2	..	..	2	..	..	..	..	..	..	..	4	..	..	..	..	1	..	..	..
Sugar refining	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Telegraph and telephone	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Textiles	1	..	..	1	..	4	1	4	..	..	..	..	..	..	..	..	..	..	..	..
Total	18	3	6	9	1	15	6	28	2	2	2	96	1	2	1	1	2	2	23	2
	90										107								25	

Confining night operation to five nights a week is considered by many employers as an advantage in recruiting a high caliber night force. Difficulty is often encountered in obtaining an efficient night crew, for the reason that the steadier and more desirable employees tend to prefer day work, because of the disorganization of their accustomed routine caused by reversing the periods for work and rest. The attraction of the long week-end has, therefore, been found of considerable assistance in offsetting the disadvantages of night work. The general considerations involved in a working schedule of five nights are quite different from those connected with the five-day week, and the two forms of the shortened week schedule are therefore not entirely comparable.

These adaptations or variations of the five-day week principle have been discussed briefly because they indicate that, in addition to the companies that have adopted this schedule as a permanent basis of operation, others are either experimenting with it in a modified form or are applying it as a temporary expedient. It was shown earlier in this discussion that many companies now operating on a year-around five-day basis were led to this decision by their experience with the shortened work week in summer. Therefore, the temporary five-day schedule is likely to play an important part in whatever development may result in future with respect to the five-day work week principle.

CHAPTER VI

GENERAL SUMMARY

THE five-day week work schedule is not, as is frequently assumed, a novelty of the last few years. The earliest instance of its use noted in this study occurred in 1908, and in this case the short weekly work arrangement has been maintained continuously for twenty years. Five of the 270 companies herein reported were found to be operating on a regular five-day schedule which had been introduced prior to 1914. The greatest progress in the movement for the shorter work week, however, has been made since 1923, as evidenced by the fact that 71% of the companies reporting the date of introduction of the five-day week had adopted this schedule between 1923 and 1928.

The total number of wage earners employed under a permanent five-day schedule is not definitely known. However, data published by the American Federation of Labor in November, 1928, indicate that 164,479 of its members in twenty trades were at that time on this schedule, and the Conference Board's study shows 270 manufacturing companies employing 216,921 persons on the basis of a five-day work week. Allowing for a certain amount of duplication and also for cases of five-day operation that were not discovered in either study, it would seem safe to estimate that about 400,000 persons were working on a five-day weekly basis at the close of 1928. This number for 1928 was substantially exceeded with the granting of the five-day week to large groups of building trades workers in August, 1929.

Yet, in spite of the fact that the five-day week has been adopted more widely than is perhaps generally realized, it still applies to only a relatively small proportion of the industrial working population. The total number of wage earners employed by the 270 companies reported in this study to be operating on a permanent five-day schedule constituted only about 2.6% of the industrial wage earners in this country, and 80% of this number were employed by the Ford Motor Company. Consequently, while the growth in recent years

and the present status of the five-day week are significant, this significance lies more in the future possibilities than in the present importance of this work arrangement.

Companies that employ this work schedule represent a number of industries and types of processing, but they are generally of the non-continuous, as contrasted with the continuous-process type. Where the process has no fixed time element, the five-day schedule appears to be susceptible of wide application, but in continuous-process industries a five-day week for employees must mean either the loss of one or two days' production each week or the employment of additional workers to provide a form of revolving shift. It is the latter expedient that has enabled the Ford Motor Company to apply the five-day principle even to the operation of coke ovens, blast furnaces and open hearth steel works.

In general, it may be stated that the five-day week is more prevalent in small than in large establishments, and that most of the exponents of this schedule in the industrial field are located in the northeastern section of the country, particularly in and around New York City. The Ford Motor Company is an outstanding exception to both of these generalizations.

Problems Involved in Five-Day Week Operation

The change from a five-and-one-half or a six-day to a five-day weekly working schedule is likely to raise certain questions of administrative policy. Even if the shift to the shorter schedule is accomplished without a reduction in total number of working hours per week, the question of relative efficiency and of quantity and quality of output in the longer working day is raised, and also the question whether the rate of pay for Saturday work, when necessary, shall be straight time or overtime.

The first problem in a consideration of five-day week operation is the disposition of hours formerly worked on Saturday. These may be distributed over the five working days in such manner that none of the former working time is lost; part of the Saturday hours may be retained and allotted among the other days and the remaining time dropped; or all of the Saturday hours may be eliminated from the weekly

work schedule. Eighty-six per cent of the 219 companies that furnished information as to the policy followed in this matter had reduced their total working hours per week in changing to the five-day week, some only slightly, others substantially. Where the change had come as the result of an agreement with organized labor, the work week under the five-day plan was usually set at forty hours.

In some cases, the adjustment of the work week to five days had been rendered difficult by legislation limiting the hours per day during which women could be employed.

With the hours of work per week reduced in changing to the five-day week, the question of possible wage adjustment immediately arises. If the five-day schedule is imposed by organized labor, as was the case in certain apparel industries, the five-day, 40-hour week without change in wage scales is usually specified. Since wage scales in these trades are customarily on a weekly basis, this arrangement results in fewer hours of work per week without reduction in wages. Where decisions on these matters have been made without pressure from labor unions, some companies have altered wage scales to permit the earning of as high, or nearly as high, wages under the shorter schedules as under the longer, while others have left the wage scales unchanged. In some cases hourly rates were adjusted and piece rates remained at former levels, on the theory that piece work permits employees to maintain their former weekly earnings if they apply themselves sufficiently to their work.

In some unionized plants covered in this study, overtime work was forbidden and therefore all Saturday work was under the ban. Other plants had not found Saturday work necessary at any time. About a third of the plants which furnished information on this subject, however, had found it advisable, at one time or another, to operate on Saturdays. In approximately two-thirds of these establishments Saturday work was placed in the same category as other overtime work and was compensated at higher than normal rates, but in 30% of the establishments the regular rates remained in force for Saturday work. A considerable majority of companies that paid higher than normal rates for Saturday work paid on the basis of time and one-half, but a few instances were noted in which double time was paid.

Effects of the Five-Day Week on Operating Efficiency

The effect upon production is likely to be the test by which the practicability of the five-day week is judged, but it is difficult to demonstrate this effect statistically. Changes in product or process, in administrative procedure or in business conditions, often coincide with the shift in working schedules, so that it is impossible to determine with any accuracy the effect of the five-day schedule upon output. But, while exact statistical comparison may be impossible, managements appear to hold settled beliefs as to whether the shorter schedule has or has not affected the volume of output. The executives of 127 companies expressed convictions upon this point. In 68% of the plants in which hours per week had been reduced in changing to the five-day schedule, it was believed that output per week had been maintained or increased. This same condition was found in 97% of the establishments in which no change had been made in the weekly total of hours of work. In all, 75% of the reporting companies expressed no complaint on the score of reduction in total output.

Certain economies are attributed to five-day operation. The uneconomical overhead cost of operating a plant on Saturday half-days is eliminated, and, particularly in companies which maintain their own steam power plant, this is by no means a negligible item. Moreover, since output on Saturday half-days has quite generally been found to be below standard, the distribution of this time, or part of it, over the other five days has tended to produce higher output per hour for the week. Even where the Saturday time had not been made up, the elimination of these hours has not been regarded as a total loss. Where processes required rather elaborate and time-consuming starting and stopping procedure, the elimination of one such routine a week has meant a substantial saving in unproductive time and expense.

Considerable stress has been laid upon the advantage of devoting Saturday forenoons to careful overhauling and repair of plant and equipment. It was the general experience that such work was performed more thoroughly when plenty of time was available, and that the consequent reduction in machine breakdowns during productive operation constituted a definite gain towards more economical production.

Attendance and punctuality were generally found to be improved as a result of five-day operation. Furthermore, such a schedule was thought to attract and hold desirable employees, whose appreciation of the two free days each week found expression in the volume and quality of their output. Employers generally were satisfied that the shorter working schedule has had a pronounced effect in raising the morale of the working force.

Objections reported to the five-day week, or to certain features of it, were neither so frequent nor so fundamental as the advantages cited in its favor. Employers who had adopted this schedule at the instigation of organized labor, as a rule considered it an imposition and were disinclined to see it in a favorable light. Others admitted disadvantages or handicaps, but did not consider them insurmountable. The fact that Saturday is an important day in some industries has made it difficult to accustom purchasers to the fact that the plant is closed on that day. A few employers expressed disapproval that some employees accepted other remunerative employment on the day that it was believed should be devoted to rest and recreation. Others questioned whether the distribution of Saturday hours over the other five days had not made these days too long for best results, especially in the high temperature of the summer and in the longer hours under artificial light in the winter. In some cases a decline in quality of work has been attributed to this cause.

The attitude of employees appears to have been quite universally favorable to the five-day schedule, even when it had resulted in some loss in wage earnings. Married women, in particular, appreciate the extra time for household duties, and men value the day for making repairs on their houses and cultivating their gardens or attending to other personal matters. Throughout the year one trip to and from the plant for only a half-day's earnings is eliminated, and in the summer months the longer week-end makes possible the enjoyment of trips farther away from home. General experience with the five-day weekly work schedule led both the employers and employees represented in this study to favor this arrangement.

Like most departures from prevailing practice, the five-

day week, at least at first, has certain drawbacks. With respect to this issue, however, the disadvantages appear to have been outweighed by the advantages derived. The preponderance of opinion in favor of the five-day week schedule indicates that in most plants reporting it has commended itself to both management and working force.

Conclusion

The conclusion that any or all industrial establishments could advantageously adopt the five-day week schedule does not follow from the evidence offered in its favor by a majority of the companies that are qualified from experience to appraise its advantages and drawbacks. This evidence does, however, remove the five-day week from the status of a radical and impractical administrative experiment and places it among the plans which, however revolutionary they may appear to some, have demonstrated both practicability and usefulness under certain circumstances. An employer who is interested in the adaptability of the five-day schedule to his own business may, therefore, approach the problem as a working schedule that has been in force for a number of years in various establishments with generally satisfactory results.

Whether or not the application of the five-day week will be extended to industry generally, and whether such extension would be economically sound and socially desirable, are questions that lie in the field of conjecture and opinion and are outside the scope of this study. The relatively very small number of individual instances of its application here surveyed, and the circumstances, sometimes inherent in special cases and sometimes imposed, under which the applications were made, afford no adequate basis for answering the broader economic and social questions reflected in the shortening of working hours. In the end, the question of the length and arrangement of the working week is likely to be settled, not on the basis of theoretical principles but by the practical experience of employers and workers, individually and in groups; and the general practice may ultimately even run counter to these principles and ignore the theoretical problems involved.

APPENDIX

LIST OF REPRESENTATIVE COMPANIES OPERATING ON A REGULAR FIVE-DAY WORK WEEK

Company	*Location*	*Product*
Simon Ackerman Clothes Co.	Rochester, N.Y.	Clothing
Addison Lithograph Co.	Rochester, N.Y.	Lithographing
American Chicle Co.	Long Island City, N.Y.	Chewing Gum
Amos Abbot Co.	Dexter, Me.	Woolens
Beatty Page, Inc.	New York City	Printing
Bellman Brook Bleachery Co.	Fairview, N.J.	Dyeing and Bleaching
Bemis Car Truck Co.	Springfield, Mass.	Railroad Supplies
E. W. Bliss Co.	Brooklyn, N.Y.	Machinery
Simon Bomzer Co.	New York City	Clothing
Boston Bank Note Co.	Boston, Mass.	Lithographing
Moto Meter Co., Inc.	Long Island City, N.Y.	Motometers
C. C. Bradley and Son, Inc.	Syracuse, N.Y.	Power Hammers
Breslin Brothers Carpet Co.	Gloucester, N.J.	Carpets
Bristol Myers Co.	Hillside, N.J.	Chemicals
Chicago Carton Co.	Chicago, Ill.	Paperboard Boxes and Cartons
Consolidated Fruit Jar Co.	New Brunswick, N.J.	Stamped Metalware
Consolidated Lithographic Co.	Brooklyn, N.Y.	Lithographing
Consolidated Paper Co.	Monroe, Mich.	Paperboard
Continental Mills	Philadelphia, Pa.	Textiles
Cranshaw Carpet Co.	Newburgh, N.Y.	Carpets
Curtis Publishing Co.	Philadelphia, Pa.	Printing and Publishing
Henry A. Dix Corp.	New York City	Uniform Dresses
Dorf and Co.	Baltimore, Md.	Hats and Caps
Doubleday Doran and Co., Inc.	Garden City, L.I., N.Y.	Publishers
Douglas Mack Co.	New York City	Clothing
L. A. Dreyfus Co.	Rosebank, S.I., N.Y.	Gutta Percha
E. R. Durkee and Co.	Elmhurst, L.I., N.Y.	Salad Dressing and Spices
Dutchess Hat Works	Beacon on Hudson, N.Y.	Hats
Eberhard Faber Pencil Co.	Brooklyn, N.Y.	Lead Pencils
Eberhard Faber Pencil Co. (Rubber Division)	Newark, N.J.	Rubber Sundries
Einson-Freeman Co., Inc.	New York City	Lithographing
J. Eisner and Sons Co., Inc.	Brooklyn, N.Y.	Clothing
Electric Meter Corp.	New York City	Electric Meters
Empire Lithographing Company	New York City	Lithographing
Empire Worsted Mills Co.	Jamestown, N.Y.	Textiles
Ford Motor Car Co.	Detroit, Mich.	Automobiles
Robert Gair Co.	New York City	Paperboard and Boxes
Gardner & Harvey Co.	Middletown, O.	Paperboard and Boxes
Wm. P. Goldman and Bros., Inc.	New York City	Clothing
A. Goldstein and Co.	New York City	Boys' Clothing

Company	*Location*	*Product*
Goodman and Levine	Rochester, N.Y.	Clothing
Gordon and Friedman	New York City	Clothing
Grinnell Lithographic Co.	New York City	Lithographing
Grossman Clothing Co.	New York City	Clothing
J. J. Grover's Sons Co.	Stoneham, Mass.	Shoes
Frederick Gumbrecht Co.	Brooklyn, N.Y.	Lithographing
Karl Gut Lithographing Co.	Bronx, N.Y.	Lithographing
Hardwood Counter Co.	Lynn, Mass.	Shoe Counters
Harodite Finishing Co.	Taunton, Mass.	Dyeing and Finishing
R. R. Heywood Co.	New York City	Lithographing
Hoag and Walden, Inc.	Lynn, Mass.	Shoes
Hochscheid's Pants Co.	Mt. Healthy, O.	Clothing
L. Hoffman Co.	New York City	Paper Boxes
Horowitz Bros. and Margareten	New York City	Matzoth and Noodles
F. C. Huyck and Sons	Albany, N.Y.	Woolens
Ilg Ventilating Co.	Chicago, Ill.	Heating and Ventilating Apparatus
Jenkins Bros.	Bridgeport, Conn.	Valves
Jenkins Bros. (Rubber Division)	Elizabeth, N.J.	Rubber Goods
Joseph and Feiss Co.	Cleveland, O.	Clothing
Kahn Tailoring Co.	Indianapolis, Ind.	Clothing
Karle Lithograph Co.	Rochester, N.Y.	Lithographing
Keller-Heumann Thompson Co.	Rochester, N.Y.	Clothing
Kessner and Rabinowitz Co.	Union City, N.J.	Hats
Kirkman and Sons	Brooklyn, N.Y.	Soap
Lamm Bros.	Boston, Mass.	Clothing
Larus and Brother Co.	Richmond, Va.	Tobacco
Lathum Lithographing and Printing Co.	Long Island City, N.Y.	Lithography
C. M. and D. B. Leavitt Co.	Haverhill, Mass.	Shoes
Le Roy Latham Printing Co.	Woodside, L.I., N.Y.	Printing and Lithographing
Lipps Bros.	New York City	Clothing
J. Lipson and Co.	New York City	Clothing
Malden Knitting Mills	Malden, Mass.	Woolens
Maryland Color Printing Co.	Baltimore, Md.	Printing
Metal Hose and Tubing Co., Inc.	Brooklyn, N.Y.	Metal Tubing and Hose
Michaels Stern and Co.	Rochester, N.Y.	Clothing
Monarch Manufacturing Co.	Milwaukee, Wis.	Work Suits
Leopold Morse Co., Inc.	Boston, Mass.	Clothing
National Meter Company	Brooklyn, N.Y.	Water and Oil Meters
N. E. Iron Works Co.	Boston, Mass.	Boilers
Parker Metal Decorating Co.	Baltimore, Md.	Metal Goods
Paul Revere Manufacturing Co.	Baltimore, Md.	Wash Suits
Pierce Lithographic Corp.	Brooklyn, N.Y.	Lithographing
Pioneer Instrument Co., Inc.	Brooklyn, N.Y.	Aircraft Instruments
Portland Rubber Co.	Portland, Ore.	Rubber Products
Queens Products Co.	Brooklyn, N.Y.	Hand Bags
Renton Heel Company	Lynn, Mass.	Heels
Rhoades and Ripley Clothing Co.	Boston, Mass.	Clothing
Rochester Folding Box Co.	Rochester, N.Y.	Boxes and Lithographing
Rochester Manufacturing Co.	Rochester, N.Y.	Machinery
Rode and Brand Co.	New York City	Lithographing
M. H. Rosenberg and Co.	New York City	Underwear
M. H. Rosenmond and Co.	New York City	Clothing
Sackett and Wilhelms Corp.	Brooklyn, N.Y.	Lithographing
Sale Lithograph Co.	Buffalo, N.Y.	Lithographing

Company	*Location*	*Product*
Schmidt and Ault Paper Co.	York, Pa.	Paperboard
Seabright Woven Felt Company	Camden, Me.	Felts
Seiter and Kappes Lithograph Co.	New York City	Lithographing
Shirek and Hirsch Co.	New York City	Clothing
Snyder and Black Co.	New York City	Lithographing
A. G. Spaulding and Bros.	Chicopee, Mass.	Sporting Goods
Stecher Lithographing Co.	Rochester, N.Y.	Lithographing
J. Stevens Arms Co.	Chicopee Falls, Mass.	Guns and Rifles
Strauss and Buegeleisen Co.	Brooklyn, N.Y.	Goggles
Sweet Orr and Co., Inc.	New York City	Clothing
Trautman Bailey and Blampey Co.	New York City	Lithographing
Trimont Manufacturing Co., Inc.	Roxbury, Mass.	Tools
Tucker Lithograph Co., Inc.	Long Island City, N.Y.	Lithographing
Unit Laundry Co.	Newark, N.J.	Laundry
U. S. Printing and Lithograph Co.	Brooklyn, N.Y.	Printing
David Weil Sons Litho Co.	Brooklyn, N.Y.	Lithographing
Whitehouse Leather Products Co., Inc.	New York City	Bags and Leather Products
J. Wise and Co., Inc.	New York City	Dresses
J. R. Wood and Sons	Brooklyn, N.Y.	Jewelry
Wright Aeronautical Corp.	Paterson, N.J.	Aero Engines
Wm. Wrigley, Jr.	Chicago, Ill.	Chewing Gum
Zabel Bros. Co.	Philadelphia, Pa.	Printers and Lithographers

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